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A Lecture
ON
CERTAIN CHRONIC GLANDULAR ENLARGEMENTS.

Delivered before the Greenock Faculty of Medicine on Dec. 6th, 1911,

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MR. PRESIDENT AND GENTLEMEN,—I have chosen this subject for my lecture, not because I have anything fresh to say regarding the etiology and pathogenesis of the diseases of lymphatic glands, but because I have had under my care recently a number of cases of glandular enlargement in which the diagnosis was a matter of no little difficulty, and which may serve, therefore, to illustrate some of the problems which present themselves in dealing with other cases of a similar kind.

CLASSIFICATION.

In proceeding to investigate any case of glandular enlargement it is well to have in one's mind some sort of classification of the various diseases to which lymphatic glands are subject. Such a classification should, if possible, be based on the etiology of the various enlargements; but as the specific virus in so many of these diseases is still unknown it seems more convenient, in the meantime at least, to group the glandular enlargements according to their histological anatomy.

The lymphatic gland, you will recollect, consists of a framework of connective tissue in which masses of lymphoid cells are arranged in regular groups. Each gland has a capsule of firm connective tissue from the inner surface of which trabeculæ are given off, and which converge towards the hilus of the gland: the spaces between the trabeculæ are filled up by a very fine reticular tissue. The lymph follicles appear as rounded nodules at the periphery of the gland, and they send off cord-like aggregations of lymphocytes which anastomose freely and form its medullary portion. Between the collections of lymphoid cells (follicles and follicular cords) lie the lymph sinuses. These spaces are traversed by the cell reticulum, and they and the reticulum are lined with flat, polygonal, epithelioid cells.

The two chief cellular elements, therefore, in the lymphatic gland are: (1) the lymphoid cells; and (2) the cells of the reticulum, with which one includes the epithelioid cells; and most of the primary diseases of glands can be grouped into one of two classes according as it is the lymphoid or the connective tissue elements that are primarily affected.

GROUP I.—HYPERPLASIA OF LYMPHOID CELLS.

In the first group the outstanding morbid change consists of a marked hyperplasia of the lymphoid cells. The follicles are thus greatly increased in size, and overflow, as it were, into the sinuses, which come to be flooded with lymphocytes. The gland on section presents, therefore, the appearance of a homogeneous mass of lymphoid cells with no differentiation into sinus and follicle. Cases with glandular enlargement of this sort have been grouped under the term lymphocytoma; but whilst the glands from such cases have much the same structure histologically, one may find marked differences clinically between the individual cases. In some cases, for example, the glands involved are limited in number, whilst in others the glandular enlargement is widespread. In some the lymphocytes infiltrate the gland capsule, and even invade the surrounding tissues; and in some cases, again, there are lymphocytes to be seen infiltrating the liver, kidneys, and other organs. In almost all the cases the disease tends to be progressive, but in some the growth is so slow as to make such cases really benign. There are, however, all degrees of malignancy to be met with, and cases that have been benign for a long time may ultimately take on a much more active growth.

Some of these cases of lymphocytoma show no change in the characters of the blood. In others, on the other hand, there is a great increase in the number of white corpuscles, and usually the increase is in the lymphocytes. There may, however, be this relative and absolute increase of lymphocytes without the total number of white cells being increased.

Under the term lymphocytoma we include, then, cases of what is called pseudoleukæmia, the lymphatic leukæmias, and the lymphosarcomas, as well as any glandular enlargement due to an overgrowth of the lymphoid elements in the gland. Warthin[1] maintains that these different forms of lymphocytoma are genetically related, that they are, indeed, but different phases of the same disease. And from the histological point of view it is by no means easy to draw a dividing line between the different forms, to distinguish histologically the gland, for example, of a case of lymphatic leukæmia from that of a case of lymphosarcoma. The line to be drawn between these two conditions is not a very definite one, and to make the differentiation more difficult the characters of the blood in lymphosarcoma sometimes assume the appearances met with in lymphatic leukæmia.

GROUP II.—OVERGROWTH OF CONNECTIVE TISSUE ELEMENTS.

In the second group of cases the enlargement depends on an overgrowth in the connective tissue elements of the gland. This hyperplasia may be regarded as inflammatory in nature, the special characters of the reaction depending on the specific virus causing the disease. I must, however, make it clear that we are at present considering only the chronic enlargements of glands, such enlargements as show little tendency to suppuration. A micro-organism by growing in, or passing through, a gland seems to lose some of its virulence, and it may be that it is this attenuation of the virus that determines the chronicity of the growth as well as the limitation of the infection to the lymphatic system.

As in Class I., so here also we may have only one group of glands enlarged, or else the enlargement may involve almost all the glands in the body; all gradations are to be met with between these two extremes.

Perhaps the most striking glandular enlargement in this second group is that seen in Hodgkin's disease (endothelioid type). But there are also cases of tuberculous, or of syphilitic, adenitis which clinically are very difficult to differentiate from Hodgkin's disease, and the same even applies to certain chronic inflammations of glands, infective in origin, but not necessarily always due to any one specific bacterium. This last type of enlargement may be called chronic simple adenitis.

Chronic Simple Adenitis.

Chronic simple adenitis, then, can probably be produced by almost any of the pathogenic micro-organisms of low virulence. The histological process consists of a proliferation of the endothelial cells and cells of the reticulum, with subsequent diffuse and slow fibrosis. The capsule of the gland becomes greatly thickened and infiltrated with cells; the trabeculæ are also thickened and the sinuses disappear. Sometimes to begin with there is a definite hyperplasia in the follicles, but in the later stages the stroma increases to such an extent as entirely to smother the lymphoid elements.

This form of adenitis most commonly affects only one group of glands, but it has been shown that the glandular enlargement may be widespread and simulate very closely Hodgkin's disease.[2]

Tuberculous Adenitis.

In the cases of tuberculous adenitis that resemble Hodgkin's disease there is little tendency to caseation, and the glands ultimately become fibrosed. The tuberculous process usually begins in the lymph follicles where there are to be seen aggregations of epithelioid and giant cells derived from the cells of the reticulum. There is also a hyperplasia of the epithelioid cells of the sinuses in the neighbourhood of the tubercle, and this may give rise to a very diffuse epithelioid tuberculosis with few giant cells and little or no caseation. The lymphoid tissue may be replaced to a considerable extent by this epithelioid growth.

This tuberculous adenitis may affect one group of glands,

[1] Osler and Macrae's System of Medicine, vol. iv., p. 827.
[2] Maladies des Veins et des Lymphatiques, by Widal, Bezançon, and Labbé, p. 117.

or the glandular enlargement may be widespread; the spleen even may become affected.

Syphilitic Adenitis.

Syphilitic adenitis is frequently met with as an early manifestation of secondary syphilis, and the glandular enlargements may be widespread and may persist for years. It is, however, the glandular enlargements of the tertiary stage that are most likely to be mistaken for Hodgkin's disease. Such cases of syphilitic adenitis are rare. Clinically they are difficult to recognise as being syphilitic in origin, and even on histological examination the appearances may resemble very closely those of a chronic tuberculous adenitis.[2] Treatment by iodide of potassium may be used as an aid in clearing up the nature of the adenitis.

Hodgkin's Disease.

Hodgkin's disease has also many of the characters of a chronic inflammation, but it is seldom difficult to distinguish it histologically from a syphilitic or a tuberculous adenitis. In Hodgkin's disease there seems to be an initial hyperplasia of the lymphoid cells with active proliferation of their germinal centres. There is also a hyperæmia of the gland with proliferation of the reticular and endothelial cells. Giant cells are formed and there are many eosinophile cells. The reticulum is increased and forms a network of rather coarse connective tissue in the meshes of which are to be seen a considerable variety of cells—large and small lymphocytes, polynuclear cells, epithelioid cells, plasma cells, eosinophile cells, and mononuclear and multinuclear giant cells. There are frequently also small areas of necrosis sometimes containing fibrin and sometimes polynuclear cells. In the later stages of the disease the gland gets almost completely converted into fibrous tissue. Secondary deposits may be met with in the spleen, liver, kidneys, bone marrow, lungs, intestinal tract, or skin. The growths in Hodgkin's disease do not, however, often invade surrounding tissues, though in some cases they do, almost in the same way as does a malignant tumour.

Secondary Infections.

Now it is to be noted that all these glandular enlargements seem to be peculiarly liable to secondary infections, which may considerably alter the histological appearances. Thus a case of simple adenitis may assume the characters of a tuberculous adenitis or of Hodgkin's disease; and, again, the glands in Hodgkin's disease may show a secondary infection with the tubercle bacillus. Or, yet again, any of the glandular enlargements of Group II. may become replaced by a growth with the histological characters of Group I. Case 3 furnishes an example of this, where what I take to have been a syphilitic adenitis was ultimately replaced by a lymphosarcomatous growth.

Characters of Blood.

There is nothing characteristic in the appearances of the blood in any of the enlargements of Group II. It is true there is very often a secondary anæmia, and sometimes a leucocytosis; but the former may be met with in any debilitating condition, and the latter is probably most often due to secondary infections. Sometimes there is a relative increase of the mononuclear cells, but this is by no means constant.

A Third Group.

A third group of glandular enlargements might be added so as to include tumour growths, and this might be subdivided according as the growth was primary or secondary. Lymphosarcoma is the most common primary tumour growth in glands, but as it seems so closely allied to lymphatic leukæmia it seems more convenient to leave it in Group I. The endothelioma is possibly also a primary growth in glands, but if so it must be very rare. Of the secondary tumour growths cancer is much the most common, but sarcoma and endothelioma may also be found as secondary growths.

ALEUKÆMIC LEUKÆMIA.

The first case I have to describe to you is one of aleukæmic leukæmia, and falls, therefore, to be classed under Group I. The clinical features of the case, however, were those of almost any of the glandular enlargements, and as there was no increase in the number of the white corpuscles the diagnosis rests almost entirely on the differential leucocyte count, which showed the presence of a very large proportion of lymphocytes. I showed blood-films from this patient at a meeting of the Glasgow Medico-Chirurgical Society[4] last winter.[5]

CASE 1.—The patient was a boy aged 13 years. The glandular enlargement was first noticed in January, 1910. The glands all over the body were enlarged but those in the cervical regions most so. During the spring months of 1910 the glands lessened in size, but towards the end of June they seemed to enlarge again. The general health all this time remained unaffected.

I saw the boy for the first time at the beginning of September, 1910, and then he looked strong and robust without any appearance of anæmia. The glandular enlargement was not very considerable, though it was quite noticeable. There were enlarged glands along the line of the sterno-mastoid as well as at the anterior borders of the trapezius. The submaxillary glands were also enlarged, but no individual gland seemed much larger than a marble. Glands of the same size were found in the armpits and in the groins. The spleen was enlarged and extended as low as the level of the umbilicus. The liver was not palpable, and there was no evidence of enlargement of the mediastinal or abdominal glands.

The chief point of interest in the subsequent course of the illness was the alternate increase and diminution in the size of the glands. Thus, by Oct. 14th, 1910, the glandular enlargement in the neck had almost disappeared. Then about the beginning of December the swelling reappeared, and by January the glands were much the same size as on Sept. 1st. There were noted for the first time a large number of small subcutaneous nodules varying in size from a pea to a millet seed, all over both arms, less numerous on the thighs, and scanty on the back. There were also nodules of this sort at the outer end of each eyebrow, and the skin here had a purple, cyanosed tint. Similar nodules were noted in the ocular conjunctiva. Subsequent to this the glands became softer in consistence and again began to lessen in size, and by the middle of February the glandular enlargements as well as the subcutaneous nodules had almost entirely disappeared. Then, yet again, the glands enlarged and by the middle of April the condition was much the same as in January. During the summer the glands again lessened in size but never so much as formerly, and in the late autumn they again became enlarged; by Nov. 11th, 1911, they were nearly as large as ever they had been. The subcutaneous nodules, too, were now very prominent and much the same as formerly noted, though on the face more numerous and of larger size than at any time before. The size of the spleen remained fairly constant and was now very little larger than a year ago.

The patient's general condition during the past year showed considerable variation and the improvement seems to have been more often coincident with the enlargements of the glands than with their diminution in size. For example, at the middle of October, 1910, the patient was pale and disinclined for exertion. A few weeks later he seemed much better and able to run about. Then again in January he was ill, seemed fevered, and was confined to bed for some weeks. He improved during last summer, and was able to be up and go outside; but he was not nearly so robust as at the corresponding time a year before.

Treatment with arsenic was carried out for many months but in a somewhat intermittent manner, as it so often seemed to cause diarrhœa. It is very doubtful if this drug had much to do with the successive diminutions in the size of the glands that I have described.

The blood count was as follows:—

Blood Counts in Case 1.

	Red corpuscles.	White corpuscles.	Hæmoglobin.
Sept. 1st, 1910	3,950,000 per c.mm.	7,916 per c.mm.	85 per cent.
Oct. 14th, ,,	3,160,000 ,,	2,812 ,,	55 ,,
Jan. 9th, 1911	3,500,000 ,,	9,000 ,,	70 ,,
Feb. 18th, ,,	1,724,800 ,,	3,000 ,,	35 ,,
April 15th, ,,	1,932,900 ,,	8,910 ,,	36 ,,
Nov. 11th, ,,	3,200,000 ,,	11,250 ,,	65 ,,

Differential Counts of White Cells.

	Polynuclear cells.	Lymphocytes.	Eosinophiles.
Sept. 1st, 1910	3 per cent.	95 per cent.	1·5 per cent.
Oct. 14th, ,,	10 ,,	87 ,,	2 ,,
Jan. 9th, 1911	6 ,,	94 ,,	—
Feb. 18th, ,,	12 ,,	88 ,,	—
April 15th, ,,	18 ,,	81 ,,	1 ,,
Nov. 11th, ,,	24 ,,	69 ,,	6 ,,

[2] Loc. cit., p. 123.

[4] Glasgow Medical Journal, February, 1911, p. 134.

[5] N.B.—This patient died on Jan. 12th, 1912.

The individual lymphocytes varied a good deal in size, but the prevailing cell was at least a half larger than a red corpuscle.

A gland was not excised in this patient, and so the diagnosis was not confirmed by histological examination; but the persistent high percentage of lymphocytes seems to leave little doubt that the case is one of lymphatic leukæmia.

ACUTE LYMPHATIC LEUKÆMIA.

The second case[6] I wish to refer to was regarded, up to a few days before death, as suffering from Hodgkin's disease, on the grounds of the glandular enlargements and the absence of any considerable leucocytosis; blood films, however, had not been examined. A differential count when it was made revealed the fact that there were only 2·5 per cent. of polynuclear cells and 97·5 per cent. of mononuclears—mostly lymphocytes; and so the diagnosis had to be altered to that of lymphatic leukæmia.

CASE 2.—The patient was a lad, aged 19, and he had large glandular swellings in the neck, axillæ, and groins. There was also increase of the manubrial dulness, the measurement being 3 inches in transverse diameter. Both liver and spleen were considerably enlarged, the former extending 4 inches and the latter 3 inches below the costal margin. The disease ran a very rapid course, the patient dying within three months from the time the glandular enlargements were first observed.

This case, then, was one of acute lymphatic leukæmia; and in such cases it is not uncommon to find little or no increase in the total number of the white corpuscles, and if this increase does appear it is frequently as one of the terminal events of the disease. There was no gland excised in this patient and a post-mortem examination was not permitted.

ADENITIS OF DOUBTFUL NATURE, WITH MALIGNANT DEVELOPMENTS.

The third case is one of considerable interest, for, to begin with, it was regarded as having the characters of one of the granulomas. Subsequently, however, the glands became overrun with lymphocytes and had therefore the appearances of lymphosarcoma.

CASE 3.—The patient was a man, aged 59, and he was under observation more or less continuously from July 1st to the time of his death on Nov. 10th, 1911. The symptoms began two years previously with a "sore throat and enlarged tonsils." Soon afterwards the glands in the right side of the neck were seen to be enlarged. This swelling gradually increased in size, and about a year later there was enlargement of the glands on the left side of the neck. Later on there were swellings noted in both armpits and in the groins. There seem to have been no constitutional symptoms complained of up to this time, but the patient stated that he had lost 3 stones in weight in the previous three years. Two years before the appearance of the glandular enlargements he contracted syphilis, for which illness he took medicine for a period of two years. Previous to this he had always been a healthy man. His wife and children were alive and well.

On admission to hospital the patient was seen to be a well-built and muscular-looking man. There were no signs of emaciation. There were considerable masses of glands on both sides of the neck, situated chiefly round the angles of the jaw. The individual glands varied a good deal in size and some were larger than a pigeon's egg. There was no definite matting together of the glands, which felt rather elastic to the touch. The right tonsil was of about the size of a walnut, the left of the size of a marble. Both had a pale, gelatinous look, and were tense and elastic on palpation. There were glandular enlargements in both axillæ and in both groins. Neither liver nor spleen was enlarged. The teeth were carious and deficient. There was a faint haze of albumin in the urine. No subcutaneous nodules were to be made out.

A gland was excised from the neck and examined histologically by Professor J. H. Teacher, who reported that the sections had all the appearances of a chronic tuberculous adenitis, with a number of foci of septic softening. A pure culture of staphylococcus albus was obtained from the gland. But in view of the history of syphilis that the patient had given, a Wassermann reaction was sought for and found to be markedly positive. This fact was now laid before Professor Teacher, and he replied that as the appearances of tubercular adenitis are so similar to the chronic adenitis met with in tertiary syphilis, the sections he had examined might quite well come from a glandular enlargement of syphilitic origin.

The patient was therefore given an intravenous injection of salvarsan, and this was repeated a fortnight later. There seemed no doubt whatever that for some days after the first injection there was definite diminution in the size of the enlarged glands, but with the second dose little change was to be noted. Subsequent to this the glands seemed to enlarge again, so that after two months in hospital the glandular condition was practically the same as on admission; the patient had lost 4 lb. in weight, but otherwise his condition seemed little altered. At this time there was no appearance of enlargement of the spleen or liver.

Iodide of potassium was now administered in from 10–20 grains three times a day, and this was continued for the next six weeks. There was, however, no improvement, and by Oct. 11th the glands in the neck, axillæ, and groins were distinctly larger than a month previously. There was now a tumour mass of the size of the closed fist to be made out in the epigastrium and there were also signs of fluid in the left pleural cavity, possibly secondary to some tumour growth in the lung.

A gland was again excised, this time from the axilla, and on examination Professor Teacher reported that it had all the appearances of lymphosarcoma. The gland was overrun with lymphocytes which entirely obscured its fibrous stroma, and the periglandular connective tissue was also infiltrated with lymphoid cells. Cultures were taken from the gland and animals were injected, but with negative results in both cases.

By Oct. 28th the glands in the armpits and in the groins were still larger, as large as a hen's egg, and the tumour mass in the epigastrium could be palpated 2 inches below the umbilicus. The spleen was also greatly enlarged. The patient died about a fortnight later. The blood was examined on two occasions, but showed no very marked abnormality.

Blood Counts in Case 3.

	Red corpuscles.	White corpuscles.	Hæmoglobin.
July 1st, 1911	4,800,000 per c.mm.	9,800 per c.mm.	70 per cent.
Oct 28th, ,,	4,624,000 ,,	11,874 ,,	80 ,,

Differential Counts of White Cells.

	Polynuclears.	Lymphocytes and mononuclears.	Eosinophiles.	Mast cells.
July 17th, 1911	47 per cent.	48 per cent.	3 per cent.	2 per cent.
Oct. 20th, ,,	67 ,,	31 ,,	2 ,,	—

It is most unfortunate that a post-mortem examination was not obtained, as it would have shown what had been the relationship of the primary adenitis to the subsequent lymphosarcomatous growth. But judging from the facts that are before us I am disposed to regard the case as having been, to begin with, either one of tuberculous or of syphilitic adenitis, more probably the latter. Later on the glands apparently took on a lymphosarcomatous growth, but at what stage of the illness this more malignant development appeared it is impossible to be sure.

HODGKIN'S DISEASE.

The fourth case had something of the same clinical features as Case 1, but on histological examination the glands of Case 4 were found to be quite typical of Hodgkin's disease.

CASE 4.—The patient was a schoolboy, aged 11, and he was in my wards from August 4th, 1911, till the time of his death on Nov. 9th. The history of the illness is not very definite, but as far as could be made out there had been some enlarged glands in the neck when the boy was 6 years old. This swelling seems to have disappeared, but to have become noticeable again about a year ago. The boy was taken to the surgical wards in the middle of June (1911) on account of enlarged glands, but subsequent to this they lessened greatly in size, and by the beginning of August the chief complaint was of anæmia, breathlessness on exertion, and swelling of the face and legs.

On admission to the medical wards the skin and mucous membranes were seen to be exceedingly pale, and there was considerable œdema of the face, feet, and legs. No enlarged glands were noted at this time. There were some small

[6] A note of this case was published in THE LANCET of July 13th, 1903, p. 162.

moist râles at both bases and at the left apex, but no enlargement of the liver or spleen. There was a faint trace of albumin in the urine, and the red corpuscles were less than 1,000,000 per c.mm. During August and September there was fairly severe diarrhœa which was difficult to check, and this, along with the râles in the chest, was very suggestive of a widespread tuberculous disease.

During the latter part of September the patient began to improve very greatly and the œdema disappeared. The anæmia, too, became much less marked. Towards the end of September, however, the glands in the neck again began to enlarge, and so rapidly as to suggest a fairly acute inflammatory condition. There was fever, too, of a somewhat irregular type. It was chiefly the glands on the right side of the neck that were enlarged, and they were very soft and elastic to the touch, and freely moveable in their surrounding connective tissue. By the middle of October the œdema of the face and feet returned and the anæmia began to increase again. By this time the glands were lessening in size. One of them was excised, and on examination showed the histological characters of a typical Hodgkin's disease. The boy grew rapidly worse and died on Nov. 9th. The blood was examined on various dates with the following results:—

Blood Counts in Case 4.

	Red corpuscles.	White corpuscles.	Hæmoglobin.
Aug. 4th, 1911...	980,000 per c.mm. ...	5,600 per c.mm. ...	18 per cent.
,, 11th, ,, ...	1,140,000 ,, ...	5,000 ,, ...	18 ,,
,, 17th, ,, ...	1,100,000 ,, ...	5,200 ,, ...	18 ,,
,, 24th, ,, ...	1,080,000 ,, ...	4,800 ,, ...	18 ,,
,, 31st, ,, ...	1,130,000 ,, ...	5,100 ,, ...	20 ,,
Sept. 20th, ,, ...	2,900,000 ,, ...	5,800 ,, ...	40 ,,
Oct. 2nd, ,, ...	3,220,000 ,, ...	4,900 ,, ...	38 ,,
,, 19th, ,, ...	2,815,000 ,, ...	3,500 ,, ...	30 ,,
,, 30th, ,, ...	1,550,000 ,, ...	11,800 ,, ...	20 ,,
Nov. 8th, ,, ...	940,000 ,, ...	4,400 ,, ...	13 ,,

Differential Count of White Cells.

	Polynuclears.	Lymphocytes.	Large mononuclears.
Oct. 15th, 1911...	... 53 per cent.	... 39 per cent.	... 8 per cent.

Necropsy.—At the post-mortem examination large glandular masses were found in both sides of the neck, and smaller glands were seen running into the thorax and surrounding the superior vena cava: the œdema of the face was evidently due to pressure on this vessel. The prevertebral glands and the glands at the root of the mesentery were also considerably enlarged. Smaller masses of glands were found in both axillæ. The largest glands came from the neck and were of about the size of a walnut; in consistence they were slightly firmer than a normal gland. The spleen was considerably enlarged and rather fibrous in structure. The marrow in the shaft of the femur was vascular and red. The other organs were very anæmic but otherwise presented little abnormality.

Histological examination of a number of glands showed them all to have the structure of a typical case of Hodgkin's disease.

HODGKIN'S DISEASE: VACCINE TREATMENT.

Case 5 was also one of Hodgkin's disease, and is of interest in that a micro-organism was cultivated from the excised gland and the patient treated by a vaccine prepared from this bacterium.

CASE 5.—The patient was a man, aged 24, and he was admitted to my wards on Sept. 6th, 1909. He remained under treatment for a period of nine months. The beginning of the illness may be dated from April, 1908, when there was noticed for the first time a small lump immediately above the right clavicle. This swelling gradually increased until by the end of August, 1909, there was a considerable tumour mass occupying the right side of the neck. The patient insisted that his general health had all along been excellent; he was always able for any sort of exertion, and his appetite had always been good.

When admitted to hospital in September, 1909, he was seen to be a well-nourished man. There was a considerable swelling on the right side of the neck extending from the mastoid process down to the clavicle. The swelling was apparently made up of a number of enlarged glands, more or less matted together and of firm consistence. On the left side of the neck there was an enlarged gland underneath the upper end of the sterno-mastoid and two enlarged glands immediately above the clavicle. In the right axilla there was a mass of glands nearly as large as a hen's egg; one enlarged gland was to be felt in the left axilla.

There was apparently also some enlargement of the mediastinal glands, for there was an area of dull percussion at the upper end of the sternum, the transverse measurement of this area being 5 inches at the sterno-clavicular articulations and 3½ inches at the level of the fourth costal cartilages. The sternal dulness was continuous below with the upper border of cardiac dulness, and the right border of cardiac dulness extended 1½ inches to the right of the mid-line; the left border was well within the nipple line. There was diminished resonance at the right supraspinous region and in the right infraclavicular area. The breath sound was slightly deficient at the right apex. But there was no dyspnœa, no stridor, and no difficulty in swallowing. The voice, too, was quite clear, and the tonsils were not enlarged. The examination of the abdomen was negative, and in particular the spleen was noted to be of normal size. The inguinal glands were not enlarged.

Glands were excised for diagnostic purposes from the left side of the neck on three different occasions—namely, on Sept. 13th, Oct. 6th, and Feb. 28th—and a subcutaneous nodule from the front of the chest on April 10th.

The histological appearances in all of the glands were much the same. There was hyperplasia of the lymphoid areas and the sinuses were crowded with lymphocytes. Scattered through the sections were small areas of polynuclear leucocytes, and round these were aggregations of small giant cells of the type seen in Hodgkin's disease, many of the cells being very large mononuclear cells and others having several nuclei. Eosinophile cells were present, especially in the neighbourhood of the giant cells. Some of the areas with polynuclear cells were necrotic.

In the gland excised on Feb. 28th there was more connective tissue round the gland and the accumulations of polynuclear cells were larger and had more the appearance of abscess formation. The nodule from the skin showed the same collections of polynuclear leucocytes with the giant cells round about them.

No cultures or smears were made from the gland first excised. But in the smears from the second gland there were found numerous beaded, rod-shaped organisms, and the same bacterium was grown on one of the culture media. In another tube a staphylococcus was obtained, but as this organism was not prominent in the smears it was discarded. No micro-organism was found in smears or in cultures from the third gland or from the nodule excised.

The progress of the case while in hospital was very slow. To begin with, treatment was by liquor arsenicalis (♏ iii.–vii. ter in die), but with little apparent benefit, for by the middle of October the swelling in the neck seemed greater than on admission. Early in November X ray treatment was begun, but again with no very great improvement.

A vaccine was now made by Dr. J. A. Campbell from the diphtheroid-like organism he had grown from the gland excised, and injections were given every ten days during December and January. By Christmas time there was certainly some diminution in the size of the glands, and by the end of February the improvement was very decided. The mediastinal dulness was now little more than normal, though the right border of cardiac dulness extended for over an inch to the right of the mid-line. But in March and April there seemed some recrudescence of the disease in that the glands on the left side of the neck were increasing in size. There appeared about this time on the right front of the chest a number of little subcutaneous nodules which ranged in size from that of a pea to a millet seed. The skin over the nodules was slightly reddened. It was one of these nodules that was excised and examined histologically.

The vaccine treatment was started again on April 18th, and there was again a very great improvement in the patient's condition and a great diminution in the size of the swellings. All the time the patient was in hospital X ray treatment was being persisted with as the state of the skin would permit; but it was during the periods of vaccine treatment that improvement seemed greatest, and this improvement seemed to cease when the injections were intermitted, to begin again with the resumption of the treatment.

The patient's general health all the time he was under observation remained very good. The weight ranged from 9 st. 12 lb. to 10 st. 7½ lb. He sweated, however, profusely, especially at night, and this sweating continued from

September to the end of March. There was some slight fever almost from admission till early in March, the range of temperature being from 97° to 100° and occasionally 101°. Seldom did the temperature remain normal for more than a fortnight at a time; there was, however, no apparent periodicity in the course of the temperature.

There was never any considerable degree of anæmia, the range of the red corpuscles being from 5,470,000 to 4,120,000 per c.mm. and the hæmoglobin from 95 to 78 per cent. From the day of admission onwards till March 15th there was a definite leucocytosis, ranging from 38,200 to 16,000 per c.mm. On April 2nd the white cells fell to 8000 per c.mm., and from that date onwards the range was from 17,800 to 10,000 per c.mm. Some of the counts may be given:—

Differential Counts in Case 5.

	Polynuclears.	Lymphocytes.	Large mononuclears.	Eosinophiles.
Sept. 8th, 1909...	84 per cent.	3 per cent.	7 per cent.	6 per cent.
Dec. 25th, ,, ...	78 ,,	12 ,,	2 ,,	8 ,,
April 4th, 1910...	72 ,,	16 ,,	1 ,,	11 ,,
April 24th, ,, ...	76 ,,	12 ,,	5 ,,	7 ,,
May 22nd, ,, ...	72 ,,	7 ,,	16 ,,	5 ,,

The patient was dismissed from hospital at the end of May, 1910, very greatly improved, the glandular enlargements having almost entirely disappeared, and with instructions to report himself in a few weeks' time. This he unfortunately failed to do, and nothing more definite is known regarding the subsequent history of his illness than that he died in March, 1911.

It is not claimed that the micro-organism grown from the gland in this case is the specific cause of Hodgkin's disease, or even that the vaccine treatment produced the improvements above recorded. One knows how often the glands lessen in size in such cases quite apart from treatment of any sort. Still, the observations are of some interest, and it might be worth while to investigate other cases along similar lines.

ENLARGEMENT OF CERVICAL AND MEDIASTINAL GLANDS (? HODGKIN'S DISEASE).

The next two cases are more difficult to classify. Both may have been suffering from Hodgkin's disease, but of this one cannot be certain.

CASE 6.—The patient was a woman, aged 32, and she was admitted to my wards on Oct. 13th, 1908, remaining under treatment for a period of four months. Her complaint was of swelling of the glands on the right side of the neck and of great shortness of breath.

The illness seemed to date from December, 1907, when the patient first complained of pain in the right shoulder and extending down the arm to the finger-tips. About this time an enlarged gland was noted on the right side of the neck. The pain continued more or less severe for six months, and the swelling in the neck gradually increased in size, some months later the glands on the left side beginning also to enlarge. There seems to have been breathlessness from the beginning of the illness, but at first it was slight and present only on exertion. It gradually became more severe, and subsequent to June, 1908, the patient had not been able to sleep except in a sitting posture. There had been some cough for a week or two before admission to hospital but scarcely any spit. The general health seemed to have been good, and there does not seem to have been much loss of weight.

On admission the patient was seen to be a well-developed and well-nourished woman. Her breathing was noisy and stridulous, and there was a frequent rather brassy cough. She would not lie down in bed as the upright posture was the only one in which she could breathe with any comfort. There were enlarged glands just above the clavicles on both sides of the neck, but they were much larger on the right side than on the left. The mediastinal glands were apparently also enlarged. There was a very dense dull note all over the upper lobe of the right lung, and the same note was obtained over the manubrium sterni. At the left apex there was a comparatively dull note as far down as the second rib. Behind on the right side the dull area extended downwards to near the angle of the scapula. Over both upper lobes the respiratory murmur was distinctly diminished in volume, but over the right it was also high-pitched and had a tubular quality. The heart was normal in size and position. There was no enlargement of the axillary or inguinal glands, and liver and spleen seemed normal in size.

A gland was excised from the neck and examined microscopically. The sections showed the gland embedded in dense connective tissue. The lymphoid tissue in the gland was overrun with polynuclear cells which were rather patchy in their distribution. There was also considerable fibrosis, and many very large clear mononuclear cells. The appearances were suggestive of a later stage of Hodgkin's disease, but not sufficiently distinctive to make one certain of the diagnosis.

The treatment in this case was by means of liquor arsenicalis (♏ ii.–v. ter in die), and X rays applied five days a week to the glands in the neck and over the sternum. In a month's time there was a great improvement in the patient's condition. The breathing was much easier, and unless when the patient was lying down the stridor was quite gone. The glands in the neck were much smaller. There was still dulness, with greatly diminished breath sound, over the right upper lobe in front, but behind the dulness had almost entirely disappeared. The note over the left lung was now clear and the breath sound of good volume. The patient had gained 2 lb. in weight.

Improvement seemed to continue for another month; but then the breathing became more difficult again, though never so bad as on admission. The patient began to lose weight. There was a good deal of cough but very little spit, and no tubercle bacilli in the spit. There was little alteration in the physical signs in the chest.

The patient went home early in February as the skin of the neck and chest was too tender to allow of any more X ray treatment. She died a week or two later.

All the time she was in hospital the temperature was distinctly febrile, being frequently as high as 100° and 101° F. There was a constant leucocytosis, the range being from 17,200 to 30,000 per c.mm. The differential count was as follows:—

Differential Counts in Case 6.

	Polynuclears.	Lymphocytes.	Large mononuclears.	Eosinophiles.
Oct. 14th, 1908...	82 per cent.	8 per cent.	7 per cent.	3 per cent.
Dec. 12th, ,, ...	86 ,,	5 ,,	7 ,,	2 ,,

There was no diminution in the number of the red corpuscles.

The condition in this case, then, was apparently one of enlargement of the cervical and mediastinal glands, but what the nature of the enlargement was one cannot be quite certain.

HODGKIN'S DISEASE OR LYMPHOSARCOMA?

CASE 7.—The patient was a young woman, aged 18, and she was under observation and treatment for three months—from Oct. 1st to Dec. 28th, 1907.

The history of the illness was to the effect that about a year before admission to hospital she noticed a swelling just above the right clavicle. Similar swellings appeared higher up in the neck and ultimately coalesced to form the considerable mass noted on admission. There was never any pain in the tumour, and the skin over it was at no time reddened. A fortnight before admission there was some breathlessness and a cough, but no spit. The voice, too, had become husky. There had been no loss of flesh, and the patient was feeling well and taking her food well.

On admission the patient was seen to be well nourished and without any appearance of emaciation. When sitting up, or when lying on the left side, there was little dyspnœa, but when lying on the back or on the right side there was stridulous breathing, suggesting pressure on the trachea. The cough had a brassy quality.

There was a large swelling on the right side of the neck extending from the clavicle up almost to the lobe of the ear, and the larynx and trachea were displaced considerably to the left of the middle line. The tumour mass was hard to the touch and fairly moveable. It seemed to consist of a mass of glands more or less matted together. The glandular enlargement apparently extended some distance into the mediastinum, for there was manubrial dulness with a transverse measurement of 4 inches. At the lower end of the sternum, too, there was a patch of dulness extending 1¼ inches to the right of the middle line, and the heart seemed slightly displaced to the left. The respiratory murmur was equal and vesicular on both sides. The tonsil

were not enlarged, and neither were the axillary, inguinal, or abdominal glands. The spleen extended 1 inch below the costal margin, but the liver was not enlarged.

The patient was treated to begin with with arsenic, and ten days later X ray treatment was commenced. At the end of six weeks a very considerable improvement had taken place in her condition. She had gained 3½ lb. in weight, and the swelling in the neck was considerably less, the circumference of the neck measuring an inch less than formerly. There was still manubrial dulness, but the dyspnœa and stridor had entirely disappeared, and the right border of cardiac dulness was now at the middle line. Six weeks later still the enlarged glands in the neck had almost disappeared, but the manubrial dulness still persisted. The temperature was subnormal throughout the illness. Examination of the blood gave the following results:—

Blood Counts in Case 7.

	Red corpuscles.	White corpuscles.	Hæmoglobin.
Oct. 1st, 1907...	4,800,000 per c.mm.	... 14,000 per c.mm.	... 60 per cent.
Nov. 16th, ,, ...	4,000,000 ,,	... 14,000 ,,	... 85 ,,
Dec. 28th, ,, ...	4,500,000 ,,	... 9,800 ,,	... 78 ,,

Differential Count of White Cells.

Polynuclear cells ...	80·0 per cent.	Large mononuclears	8·5 per cent.
Lymphocytes	10·5 ,,	Eosinophiles	1·0 ,,

The subsequent history, as obtained from an aunt of the patient, was to the effect that about four months after dismissal the glands again enlarged and there was a return of the dyspnœa. The patient went to Ireland and died two years later with a "decline"—that is, about three and a half years from the time the swelling in the neck was first noted.

No histological examination was made in this case, so it is impossible to be certain of the nature of the glandular enlargement: it might have been either Hodgkin's disease or a lymphosarcoma.

ENDOTHELIOMA (?)

The last two cases fall to be grouped with the malignant neoplasms, but the nature of the disease process in both cases was not determined till after death.

CASE 8.—The patient was a man, aged 43, and he was in my wards from July 28th till the time of his death on Nov. 18th, 1911.

The history of the illness is to the effect that three years ago the patient received a blow on the left side of the face and neck. He was not badly hurt, but three days later he noticed some swelling on this side of the neck, and for the next four weeks the swelling gradually increased in size. Plasters were applied and the swelling lessened very much, though it is not certain that it entirely disappeared. A year ago the swelling again became rather prominent, and since then it had gradually increased in size. Six months later the swelling appeared on the right side of the neck, and about this time the patient began to have some difficulty in speaking and swallowing, due, he said, to a lump at the back of his throat. There is no history of much constitutional disturbance or of any notable loss of weight.

On admission to hospital the patient was seen to be a well-developed man but rather emaciated. There was a considerable glandular enlargement on both sides of the neck involving chiefly the glands about the angles of the jaw. The mass on the right side seemed moderately moveable, but that on the left was rather firmly bound down to the underlying structures, and the individual glands seemed somewhat matted together. There was limitation in the movements of the head, not only of rotation, but also of flexion and extension. The jaws, too, could only be separated a short distance, about an inch at the most, and there was thus some difficulty in making a satisfactory examination of the fauces. It was sufficiently evident, however, that there was a large swelling in the posterior wall of the pharynx pushing the soft palate some distance forwards, and it seemed reasonable to suppose that this swelling was continuous with the swellings on both sides of the neck. There was difficulty in protruding the tongue and also in swallowing, but there was no dyspnœa, though the breathing was noisy and the speech indistinct, suggesting some obstruction about the posterior nares. The teeth were in a rather bad condition. There was no pulmonary or cardiac lesion, and no enlargement of the liver or spleen, or of the axillary or inguinal glands.

A gland was excised from the neck and examined by Professor Teacher, who reported that the sections showed a very chronic inflammatory condition, with here and there some aggregations of polynuclear cells. The culture media remained sterile.

In the next four weeks the patient was apparently getting worse. He was losing weight, and there was difficulty in swallowing solids, and considerable respiratory embarrassment. The case clinically had all the features of a malignant growth, and as this had not been confirmed by the histological examination a second gland was excised towards the end of September. Professor Teacher reported that "this gland shows practically the same condition as before—viz., chronic lymphadenitis, with granulation formation, fibrosis, and foci of polymorphonuclear leucocytes."

The administration of fibrolysin was started about the beginning of September and continued for several weeks with apparent relief as regard the symptoms, for by the beginning of October the glands seemed smaller and the dyspnœa was much less. Subsequent to this, however, the glands enlarged again and the patient began to emaciate rather rapidly and to lose strength; he died on Nov. 18th.

During the 16 weeks the patient was in hospital there was some slight fever, the temperature never remaining normal for longer than one week at a time, but it was rarely higher than 100° and only once as high as 101°. The blood count (July 31st, 1911) in this case was as follows: Red corpuscles, 4,410,000 per c.mm.; white corpuscles, 21,250 per c.mm.; hæmoglobin, 74 per cent.

The leucocytosis persisted all the time he was under observation, never being less than 14,200 per c.mm. The differential count on July 31st gave the following proportions:—

Polynuclear cells ...	81 per cent.	Large mononuclears...	10 per cent.
Lymphocytes	8 ,,	Eosinophiles	1 ,,

Necropsy.—At the post-mortem examination there was noted to be an enormous collar of glands in the neck extending from the ears to the clavicles. The glands were firmly matted together. The pharynx was pushed forwards by it and the œsophagus being compressed by the growth, though there was no infiltration of their walls. There was no extension of the growth into the nose or ethmoid cells, but there was some erosion of the bones forming the base of the skull. Neither the tonsils nor the bronchial glands were enlarged, and there were only a few slightly enlarged glands in the upper part of the thorax. There were no metastases to be found.

A somewhat detailed examination of the tumour was undertaken by Dr. J. H. McNicol, and his preparations have been submitted to Professor Teacher, who, after examining a considerable number of slides taken from different portions of the growth, is of opinion that the neoplasm is probably of the nature of an endothelioma. Whether this is a primary growth in the glands or secondary to growth elsewhere one cannot be certain, but careful search has failed to discover a primary seat of origin either in the carotid body or on any endothelial surface. If this growth is an endothelioma it differs in certain essentials from the cases of endothelioma of the neck described by Gilford,[7] in which the lymphatic glands do not seem to have been implicated in any way whatever.

SARCOMA.

CASE 9.[8]—The patient was a man, aged 38, and it was in August, 1905, that he first noted a swelling at the angle of the right jaw. This swelling gradually increased in size and other little tumours appeared in its neighbourhood. By the end of December (1905) enlarged glands were also noted on the left side of the neck. He was admitted to hospital in February, 1906, and then it was observed that on the right side there were enlarged glands extending from the mastoid process to the clavicle and varying in size from that of a pea to that of a walnut. On the left side there was one large gland, the others being small like peas. Some of the glands felt very hard and others rather elastic, but they were all freely moveable. Neither the axillary nor the inguinal glands were enlarged, and the liver and spleen were normal in size. Examination of the blood showed no abnormality.

The case was thought to be one of Hodgkin's disease and was treated with arsenic. There was at first great

[7] Practitioner, December, 1904, p. 729.

[8] This case was published in THE LANCET of July 11th, 1908.

diminution in the size of the glands, but subsequently they again enlarged, and by August, 1906, they were as large as ever they had been. There was now noted a swelling of the size of a marble in the roof of the mouth, and some weeks later subcutaneous nodules over the right pectoral region. Towards the end of September the breathing became noisy, with spasms of dyspnœa, and the patient died early in October. There was no anæmia in this case and no leucocytosis; the proportion of polynuclear cells was 81 per cent., of mononuclears 18 per cent.

Necropsy.—At the post-mortem examination a large tumour mass was found surrounding the larynx, trachea, and œsophagus, and extending upwards through the base of the skull and forwards into the roof of the mouth. This growth was found to be a round-cell sarcoma, and the nodules in the pectoral region had the same structure. It was impossible to determine the point of origin of the primary growth, or that the glandular enlargement was not from the first sarcomatous in origin, for microscopic examination failed to give evidence of there having been any previous lesion in the glands affected.

In concluding, I wish to express my great indebtedness to my colleagues at the Royal Infirmary for their able assistance in investigating the above cases—to Mr. Paterson, who excised the glands in the various cases; to Professor Teacher for the histological examination of the glands; to Dr. Campbell for the bacteriological examination; and to Dr. McNicol for his study of Cases 4 and 8. Without the aid of all these gentlemen the records of the cases would have been very incomplete.

A Lecture

ON

AMPUTATION FOR DIABETIC GANGRENE.

Delivered at St. Bartholomew's Hospital on Dec. 13th, 1911,

BY C. B. LOCKWOOD, F.R.C.S. ENG.,

SURGEON TO THE HOSPITAL.

GENTLEMEN,—I lecture to-day upon a most dangerous complication of a most dangerous disease—diabetic gangrene.

PRELIMINARY REMARKS.

The word diabetes does not in itself afford much information. It means "the passer through" or syphon, and one of the patients about whom I am going to speak certainly was "a passer through." In these vessels Mr. Grange has put the quantity of urine passed in 24 hours, and it amounts to one and a quarter gallons; sometimes it was at least one and a half gallons.

Glycosuria and its Results.

This urine was of high specific gravity, because it contained a huge quantity of grape-sugar or dextrose. In this large basin Mr. Grange has kindly put the quantity of dextrose which was contained each day in the urine. That basin full of sweet substance has in it 13½ ounces. I cannot help thinking that a human being who is passing out one and a half gallons of urine in a day, even if he drinks over a gallon, as this man did, must be draining his tissues of fluid, and no wonder he is thirsty. And if instead of using the sugar for the nutrition of the tissues it is passing out, those tissues will be starved and weight will be lost. Doubtless the blood and the tissues have in them quantities of sugar. Sugar passing through the vessels is likely to damage them; presently I will tell you about the condition of the arteries. But more than that, the sugar passing along the vessels and into the tissues makes them more susceptible to septic infection. A broth or gelatin culture with sugar in it is an extra good soil to grow bacteria upon.

Lack of Oxygen.

There is one other point which has struck me very much about the patients who have been operated upon for diabetic gangrene—that many of them were exceedingly blue. Here is an admirable book written by Dr. Langdon Brown, entitled "Physiological Principles in Treatment." I observe on almost every page written about diabetes some reference to the "lack of oxygen," to the "deficiency of oxygen," to the "want of oxygen." This lack of oxygen plays a very profound part in the causation of diabetic gangrene. Presently you see that the want of oxygen is not only general, as may be betokened by the blue lips, the purple face, and the blue extremities, but is also local, for there is a local asphyxia of the tissues which may end in them dying. In diabetic gangrene the peripheral conditions favour the death of the tissues. They are blue, ill-supplied with oxygen, and saturated with sugar.

Calcareous Condition of Arteries.

But in addition the arteries are oftentimes inflamed or calcified and ill-suited for the circulation of the blood.

Here are some calcified arteries from the museum. It might be thought that they are exaggerated specimens of calcified arteries, but one of the patients for whom I performed amputation of the leg for diabetic gangrene had arteries which were so calcified that Mr. H. R. Wadd aptly compared them to a bird's trachea. Another patient with diabetic gangrene had arteries which were so brittle and calcified that they would not tie, and in the end the vessel was secured by passing a piece of silk underneath it and the surrounding tissues, and then tying it with extreme caution. And in these cases of gangrene the calcareous vessels can be seen in an X ray photograph, as in a patient who was in the casualty ward with gangrene of his leg.

Albuminuria.—Neuritis.

Many with diabetes who have reached the stage of gangrene have also albumin in the urine, and in the notes you will frequently find that the urine contained sugar in quantities and also albumin. Albumin may mean little or it may mean much, but it will tell you this: a patient with sugar and with albumin in his urine is of necessity in greater danger than is one with sugar alone. When the urine has renal casts in it the kidneys are gravely and permanently diseased and may not continue to function. Some who are supposed to die from diabetic coma may have died with uræmic poisoning. Lastly, in diabetic gangrene the peripheral nerves are in an unsatisfactory state, probably before the gangrene supervenes. But if the gangrene has supervened the neuritis is intense, and those with diabetic gangrene suffer the most horrible anguish; a very good reason why they should have prompt surgical help.

A Case of Diabetes following Cholangitis.

CASE 1.—As bearing on the causation of diabetes. A patient had an acute septic inflammation of the gall-bladder, which was drained. Then the liver became swollen and tender, and the gall-ducts were probably inflamed. During the course of the cholangitis the pancreas became inflamed. The stools were full of fat and starches, and at the same time there were obvious swelling and tenderness in the region of the pancreas. The patient must have had great tenacity of life, because she recovered from these conditions. There is one point which I will mention now, because it may be of service: it is that her recovery began after she was dosed with urotropine. I think that is a drug which is not only excreted by the kidneys, but also by other glands and by the pancreas. So urotropine was given, and whether by chance or not she certainly began to improve. But then it was discovered that the urine contained sugar in considerable quantities.

Site of Gangrene.

Towards the end of diabetes a time arrives when the tissues which are in the condition that I have described may die. The gangrene most often takes place in the lower extremities. But one of my patients with gangrene of the leg also had patches of gangrene on the back. Another had a patch of gangrene upon the thumb. It is possible that so-called spontaneous gangrene of the penis and scrotum is allied to diabetic gangrene. You may not have heard of spontaneous gangrene of the penis and scrotum, but every now and then a patient is brought into the surgery whose penis and scrotum have become black and gangrenous, without obvious cause.

AMPUTATIONS.

Amputations for diabetic gangrene are not very common. But out of 54 major amputations—interscapulo-thoracic,

shoulder, hip, thigh, leg—16 were operated upon for gangrene, and of those half were operated upon for diabetic gangrene. The mortality in these eight was very high indeed. Five had amputation performed at the junction of the upper and middle third of the leg for diabetic gangrene, and only one of them is known to have survived. It is possible that another survived, but it is not in my notes; and we are safe in assuming that four out of five succumbed. The patient who did not die had not got diseased arteries. The urine contained 4 per cent. of sugar at times and a moderate quantity of albumin.

Three patients had amputation performed through the thigh for diabetic gangrene. One of these died, but two recovered. The one who died had exceedingly calcareous arteries, a very unfavourable complication.

Causes of Death after Amputation.

Death after amputation is brought about either by septic infection or diabetic coma. The flaps have, not infrequently, sloughed, and the stump has become profoundly septic. Diabetic coma may follow the sepsis or come on by itself. The patient, after smelling of acetone, becomes apathetic, then drowsy, comatose, stertorous, and at last dies. You are familiar with the smell of acetone, for acetone collodion is frequently used. Once familiar with the smell it is easily detected, and is a profoundly unfavourable sign—the precursor of diabetic coma.

Shock.

A patient may have those curious black asphyxiated patches about the foot, and yet they may not become gangrenous. Inky black they may exist for weeks or months, but the onset of sepsis is most serious and dangerous. The sepsis may be brought about by some trivial cause.

CASE 2.—For instance, a lady who had 4 per cent. of sugar in the urine applied strong sulphuric acid to a corn upon the little toe, and that resulted in a small septic wound. From that the diabetic tissues became infected, the infection spread up the leg, and amputation was performed. She died from shock through loss of blood. The femoral artery was held by the fingers, the fingers did not control it properly, and there was considerable loss of blood, from the shock of which she never recovered. Shock is one of the dangers of operations for diabetic gangrene.

Septic Infection.

In another case the onset of diabetic gangrene was due to suppuration beneath a corn. I can recall another in which the diabetic gangrene was caused by a tack which ran into the foot whilst the patient was walking about without shoes or stockings on. When once septic infection has started it spreads with great rapidity. The foot becomes red and œdematous, and the sepsis spreads up the lymphatics and up the tendon sheaths. The last might not be noticed because the tendon sheaths are beneath the deep fascia, so that the inflammation may have spread high without being seen. This has a practical bearing when we have to decide where to amputate. If the seat of election be infected tissues the sepsis continues in the stump, and the patient is in horrible danger of gangrene of the flaps and of acetonæmia and diabetic coma. The infection occasionally spreads by way of the veins, for clots form in them, and these are, of course, infected.

Notes of Case of Amputation.

CASE 3.—Some time ago a patient, aged 65, after having had diabetes for several years, got gangrene of the toes. In addition to the gangrene there were inflammatory œdema of the dorsum of the foot and deep-seated tenderness in the leg. This was suspected to be due to sepsis passing up the deeper tissues, especially the sheaths of the tendons. He was profoundly ill. Owing to septic absorption the pulse was at least 135 and intermitted.

Intermittent pulses are to be studied. We often have patients in the wards whose pulses are beating quickly and intermit, and you will have to be able to form an estimate of what that intermittency means. If the patient has obvious mitral or aortic disease, an intermittent pulse is a serious matter. If a patient has an intermittent pulse which, when a strain is put upon the heart, intermits more, that is serious. But if a patient has a pulse which intermits, and becomes steady when a strain is put upon the heart, clearly that is not important. A patient in the ward the other day had a large cystic adenoma of the thyroid gland; the pulse was rapid and intermittent. It was of importance, in view of such a grave operation, to know what would happen to the heart during the performance of the operation. So she was made to get up and walk about the ward, and we found her heart became steadier. A little boy had acute appendicitis; he was a delicate little creature, and his pulse intermitted. He was sat up in bed, and walked about the room, and then the pulse became steady.

So the intermittent pulse of this old man had to be taken very much into account. He was taking alcohol and continued it. And in addition he was dosed with strophanthus. This is a drug which makes the ventricles of the heart beat more strongly, and, of course, strophanthus has an advantage over another drug which is used for the same purpose—digitalis—that it does not contract the peripheral vessels. It would not be rational medicine to give a person with gangrene of the leg a drug which contracted the peripheral vessels and impeded the peripheral circulation. There was one other point in the preliminary treatment. I have told you what a danger the formation of acetone is. The formation of acetone is preceded by the formation of diacetic acid, and therefore considerable doses of bicarbonate of soda were given, at least half an ounce in the 24 hours.

As soon as possible after this preliminary treatment the patient's thigh was amputated. Why should one who has a foot which is gangrenous and dead keep the limb? It is a source of great danger and the toxins absorbed from it add to the dangers of acetonæmia and diabetic coma. In this case no X ray photographs were taken, but the peripheral arteries were not calcareous. The femoral artery, although thickened and chronically inflamed, was not calcareous. But here comes the application of some of the things that I have told you about. We amputated in the way in which I am now accustomed to amputate. We did not apply a tourniquet, Esmarch's or otherwise, to the thigh. Think of applying a band of that sort to one of those calcareous arteries! No wonder after the use of Esmarch's bandages and bands gangrene recurs in the flaps. But tourniquets, besides crushing these arteries, are very apt to press and injure the vein which runs at the side of the artery. Again an elastic tourniquet, besides asphyxiating the whole limb, causes arterial paralysis. When Esmarch's bandage has been used blood goes on dripping from the muscles and flaps, and much valuable time has to be spent in putting on ligatures, when after all it was better that the patient should be back in bed.

Operation.—For this operation the patient was laid on his back on a table and an incision was made at the lower end of Hunter's canal. The superficial femoral artery and vein were then and there secured. When you think about it, the main arteries in an amputation have to be secured at some time or another, and why the surgeon should not begin by securing the great vessels and be finished with them I am at a loss to imagine. There was one little complication in the ligature of these vessels. The superficial femoral artery and vein were so fastened together by inflammation that I thought it better not to waste time in trying to separate them, but tied them together with ordinary chromicised gut ligature. The next step after securing the great vessels was to leave the patient in the same position, and with a scalpel to cut flaps quietly and slowly, and secure each vessel the moment it bled, as in other operations; then to saw through the bone and put the drainage-tube in, and finish the amputation in the usual manner.

Everyone is prejudiced about his own ideas, so I asked Mr. Richard Gill, who gave the anæsthetic, what he thought about the shock in this case, and Mr. Gill was very emphatically of opinion—perhaps he was kind in saying so—that there was none at all—but certainly there was singularly little shock.

This patient, after the operation, was put back in bed. And observe what a parlous condition he was in. He had a pulse which was very rapid for an old man or for anybody else; he had a very high temperature; he had 4 per cent. of sugar in his urine; so acetonæmia was impending. He had some patches which were very blue in colour on the other foot and on the thumb. Of course, the treatment which he had had before the operation was continued—the bicarbonate of soda, the alcohol, and the strophanthus. But now he had a treatment which

surely must be of great importance in these cases. The moment the operation was over we began the continuous administration of oxygen. He had oxygen to inhale for nearly a fortnight. He liked it very much indeed and was pleased to have it; asked for it, and it obviously did immense good.

Remarkable Effects of Oxygen Inhalation.

Do you remember what I said about Dr. Langdon Brown saying in his book on nearly every page relating to diabetes something about the want of oxygen in the tissues and the need for oxygen? And yet it seems strange to me that at the end of that chapter he does not say, "Therefore you must give these patients as much oxygen as you can get them to take."

The administration of oxygen has a most extraordinary effect. I was about to amputate the breast of a stout female whose face and lips were blue. Although most unfavourable, yet it was not right to leave her to die of carcinoma of the breast, which was on the point of ulceration. So before the operation oxygen was ordered to be ready. During the operation the blood which flowed from the wound was deep purple. Then the oxygen was turned on, and at that moment all the wound became vivid red. The blood became arterial instead of being of the colour of dark treacle. That experience has made a most profound impression on my mind. If the tissues are in a condition such as that in diabetic gangrene, perhaps livid, with those dark patches on the heels and back, surely the more oxygen given to those defective tissues the better. I cannot help associating the recovery of that old man with this supply of oxygen, and I should say that the stump did unusually well; it healed by first intention, and the patient lived for 16 months.

Another Illustrative Case.

I will briefly refer to another case which was treated in the same manner. Many of you might have seen the operation performed.

CASE 4.—The patient was in Paget ward. He was certainly in a parlous state. There was extensive gangrene of the left foot and leg. One gallon of urine was passing out of him every day, and it contained 13½ ounces of sugar. He was not very thirsty, although he sometimes drank a gallon of fluid a day. At the time of the operation the pulse was accelerated to 104, and the temperature had been nearly 102° F. The respirations, too, were accelerated, being 24 before the operation. His thigh was amputated in the same way as the last. The main vessels were tied and the bleeding stopped; he was never moved about on the table; and the moment he returned to the ward the continuous inhalation of oxygen was begun. He was very apathetic and sleepy, and was obviously on the verge of acetone poisoning. The urine contained diacetic acid, so that everything was in readiness for acetonæmia, but he survived and improved. For some inscrutable reason the house surgeon in charge of the case stopped the oxygen; perhaps he thought a hospital which was running into debt had no right to spend money on oxygen. But when the oxygen was stopped the patient became worse and I thought he would die. It was begun again and the patient improved, and slowly mended until we were able to send him out of the hospital. His wound, I thought, did remarkably well. Except for the places where the drainage-tube was put in, it healed by first intention, but the drainage opening shortly closed, and he did exceedingly well for such a class of case.

Site of Amputation.

But observe I amputated through the thigh. And I have told you of five cases in which I amputated through the leg, and three or four of them died. I have not time now to go into the reasons of their deaths. One died from shock and hæmorrhage due to the operation, one died from diabetic coma, and one died probably from sepsis.

The dangers of dying from sepsis seem to me far greater if you amputate through the leg, because you have still to deal there with calcareous vessels, and there may be still some infection of the lymphatics, veins, or tendon sheaths. I have clearly made up my mind now, from my limited experience of diabetic gangrene, that the amputation is better performed through the thigh and in the way I have described to you, and better performed at the earliest possible stage of the disease. Do not wait until the gangrene has spread, until the patient has become septic, and until the chances of prolonging life are vastly diminished.

THE TREATMENT OF PUERPERAL SEPTICÆMIA BY BACTERIAL VACCINES.[1]

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IN the course of a discussion on "vaccine-therapy" held by the Hunterian Society in the spring of 1910 I made a preliminary report on a series of 20 cases of puerperal sepsis which had been investigated in the bacteriological laboratory of the London Hospital. Of these 20 cases 13 had been treated by inoculation. Since then we have continued working on the same lines, with the result that we have now a series of 100 cases which have been investigated, and 56 of these have been treated with vaccines.

The cases in the present series have, with few exceptions, been patients admitted to the puerperal septicæmia ward at the London Hospital. These patients are drawn from the neighbouring districts after confinements in their own homes, often under the most unfavourable sanitary conditions. In many cases they have been attended by a midwife and in others by a private doctor. It will be realised, therefore, that the present series includes only those cases which are looked upon prognostically as of such gravity as to necessitate removal to hospital. It should be added that these cases are all notified under the Act.

As I pointed out in my previous report, the very wide difference in mortality given by different authorities indicates that there is a considerable difference of opinion as to what should be included in the term "puerperal septicæmia." Clinically, a diagnosis of septicæmia rests largely on the temperature, the pulse, or a combination of temperature and pulse. Bacteriologically, a diagnosis of septicæmia may be made on a positive blood culture. If the result of blood culture is negative it does not follow that the case is not a septicæmia. It is well known that a blood culture may be done on one and the same case on several occasions, and be positive one time and negative another time. Further, if several tubes of media be inoculated at the same time some may show growth while others remain sterile. Again, special precautions with regard to media or quantity and dilution of blood may give a positive culture in a case which has been negatived by ordinary routine methods.

I would suggest that the explanation of these facts is that a septicæmia is not in most cases a condition in which multiplication of bacteria takes place to any great extent in the blood stream, but rather a condition in which there is a local bacterial infection around which the tissues have not reacted to form a localising barrier, and, consequently, bacteria are more or less continually being carried away into the general circulation. Here they probably do not survive very long unless they form an embolus or get caught in a thrombus, in which cases pyæmic abscesses may occur. If this is so we have included under the clinical term "puerperal fever" at least two different conditions: (1) a localised bacterial infection in the genital tract which is associated with more or less toxæmia; and (2) a local infection in the genital tract from which bacteria are being carried into the blood stream, continuously or discontinuously. These latter cases constitute the group of true septicæmias, but it must be realised that the two groups merge into one another and clinically cannot always be separated, and this doubtless explains the extraordinary variations of opinion as to the mortality. The determining factors would appear to be the relative balance between the virulence of the infecting agent on the one hand and the resistance of the tissues on the other.

In tabulating the cases which we have investigated and treated an attempt has been made to record those points which are of especial interest without making the tables too full of detail to be easily read. Further, the order in which the cases have been placed has been chosen as far as possible to simplify the deduction of conclusions. The cases are divided into two tables: (1) cases treated by vaccines; and (2) cases untreated by vaccines. In each table the patients

[1] A paper read before the Obstetrical and Gynæcological Section of the Royal Society of Medicine on Feb. 1st, 1912.

who lived are grouped together, as also are those who died. Further, in each of these groups the cases in which there was definite bacteriological evidence of a blood infection are placed first.

I propose now to discuss briefly the results detailed in these tables, and at the same time a few words of explanation will be necessary about some of the headings.

"*Nature of labour.*"—This information is, of course, obtained second-hand, and it will be seen that in many cases, although it is put down as "normal," reference to the column "Other treatment" will show that in reality it was abnormal in so far as there was incomplete delivery of the placenta or membranes.

Out of the 100 cases 25 followed on miscarriage. In only 2 of these was a history obtained of criminal interference. The number of primiparæ, 27—that is, 36 per cent. if we exclude the miscarriages, or 27 per cent. including them—does not appear to be excessive, but in all probability this note is omitted in several more cases.

I regret that I have been unable to obtain more precise details as to examination or interference during the various stages of labour. It would appear, however, from the number of cases in which the third stage was abnormal or incomplete, that the risk of infection in such cases is many times greater than in those where there is interference in the second stage, the reason obviously being that in the third stage there is a wound area exposed, while in the second stage manipulation takes place within the membranes.

"*Day of onset.*"—This is taken as the day on which marked pyrexia was first observed. This is noted in 81 cases. It will be seen that 62 per cent. of the cases occur on the second or third day after delivery. It is also interesting to note that if we take the fatal cases alone the incidence on the second day is as great as that on the third day (11 to 11), while if we take the cases which lived the incidence on the third day is nearly double that on the second day (18 to 10). This suggests that the more virulent the infection the more rapid will be the onset and the more fatal the result.

"*Rigors.*"—It does not appear that any absolute prognostic significance can be attached to the presence or absence of rigors alone. Some of the most virulent and rapidly fatal cases never have a rigor at all, while others may have rigors almost daily for many weeks and eventually recover completely. It has been suggested by Schottmüller that a rigor is indicative of bacteria being thrown into the blood stream, and, further, that the height of temperature is proportionate to the number of bacteria in the blood stream. This is supported by the fact that a single rigor frequently occurs shortly after the operation for clearing out an infected uterus, at which time it is easily conceivable that a few bacteria are shot into the circulation. This is also in accordance with the fact that a blood culture may sometimes show a growth if taken during or soon after a rigor, although previous cultures have remained sterile. It would seem probable, therefore, that the presence of repeated rigors denotes an improperly localised focus of infection, often septic thrombosed veins, which is the basis of a septicæmia.

"*Blood cultures.*"—This has been done in almost every case. 8–10 c.c. of blood is obtained by venipuncture and inoculated into tubes of ordinary glycerine and glucose broth. These are incubated at 37·6° C. for four days before being reported as negative. Some of the more recent cases have been incubated under anaerobic as well as aerobic conditions.

In 96 cases in which the blood has been examined a positive result has been obtained in 39—i.e., 40 per cent. This is clearly an under estimate of the number of true blood infections, as it will be seen that the blood examination has on several occasions been reported negative where pyæmic abscesses afford definite evidence of a blood infection. If it were possible always to take cultures during a rigor or when the temperature was at its highest point, the chances of getting a positive culture would probably be greatly increased. Of the 39 positive results 36 contained streptococci, and of these all but 2 were grown aerobically. Two cases grew staphylococcus aureus and one case grew a Gram-negative coccus which failed to grow in subculture. The two staphylococcus aureus cases were both following abortion, in one instance criminally induced.

"*Uterus cultures.*"—These have been taken by a method similar to one which has been used by Menge and Krönig. This is usually done in conjunction with the operation for removing retained secundines. After the vagina has been thoroughly douched the cervix is drawn down towards the vulva. This tends to straighten any flexion of the body on the cervix. A straight glass tube with a rubber diaphragm at the top is then passed up to the fundus. Having felt that its end is against the fundus it is withdrawn one inch. Knowing, then, that we have that much space to spare we can boldly pierce the rubber membrane with a Pasteur pipette without fear of wounding the wall of the uterus. Material is then sucked into the pipette by means of a rubber teat, and on withdrawing it the tip is sealed in a flame. The material obtained is then examined by films and cultures. On withdrawing the tube the uterus may be cleared out as usual.

As a further safeguard against contamination from the cervix a wider bore tube may first be passed up the cervix for two inches; the rubber capped tube is then passed without touching the cervix at all. It is important that the finger be not introduced before the cultures are taken, as by so doing contaminations may be introduced and also frequently such free hæmorrhage is set up that the specimen obtained contains little more than pure blood.

Cultures were taken from the uterus in 43 cases in this series. In 31 instances streptococci were grown in pure culture. Twice streptococci grew in large numbers, together with a few colonies of coliform bacilli, which were no doubt contaminations from the vagina or cervix. On one occasion staphylococcus albus alone grew, and on one occasion the cultures were noted contaminated. In only 7 cases were the results completely negative, and there is reason to believe that in some instances this was due to faulty technique. It will be seen, therefore, that streptococci occurred in 80 per cent. of the cases examined and in 76 per cent. in pure culture.

It should be remembered that these cases have been investigated entirely with a view to possible specific treatment and not as part of a research into the bacteriology of the genital canal in puerperal fever.

I find that two papers dealing at length with this subject have been read before this section during the last few years. It will therefore be of interest briefly to compare my results with those obtained by the authors of those papers. I refer to a paper by Mr. A. G. R. Foulerton and Dr. W. F. Victor Bonney[2] in 1905 on "The Causation of Puerperal Infections," and one by Dr. A. W. W. Lea and Dr. E. J. Sidebotham[3] in 1909 on "The Bacteria of the Puerperal Uterus." It will be remembered that these workers each employed a different technique and obtained widely divergent results. Foulerton and Bonney used a glass tube with a paraffined wool cap at one end. Within the tube was a copper wire bearing a sterile swab. The tube was passed through the cervical canal, and the paraffined cap pulled off by means of a string. The wire with the swab attached to it was then advanced to the fundus and withdrawn again into the tube. The apparatus was then removed, with the swab inside, and plugged at each end. Lea and Sidebotham used a glass tube which was passed up to the fundus, suction being then applied by means of a syringe. It appears to me that the former technique is good, while the latter could not be expected to give reliable results. Turning to their results, briefly, Foulerton and Bonney found that (1) in 12 cases of normal puerperium examined, 100 per cent. sterile; (2) in 40 cases of severe puerperal infection examined, 80 per cent. had bacteria present; and (3) in these 40 cases streptococci or Gram + diplococci were present in 77·5 per cent. On the other hand, Lea and Sidebotham examined the contents of the uterus in 58 cases of normal puerperium and found bacteria present in 80 per cent. In these 46 cases 120 bacteria were found, an average of 2·8 varieties per case. If we compare this with the 100 per cent. sterile results quoted above it appears to me that imperfect technique is the only possible explanation of the difference. The point is important for this reason. If the uterus normally contains numerous bacteria during the puerperium it is clearly futile to waste time isolating pathogenic from non-pathogenic bacteria for the purpose of making a vaccine to

[2] THE LANCET, Jan. 21st, 1905, p. 162. Trans. Obstet. Soc., Lond., vol. xlvii., p. 11.
[3] Proc. Roy. Soc. Med., Obstet. Section, 1909, vol. ii., p. 127.

treat a severe septicæmia. Our results which I have already quoted show that we can obtain a pure culture from the puerperal uterus in 76 per cent. of infected cases. This appears to me to be strong evidence against the correctness of Lea and Sidebotham's results.

It may sound paradoxical, but every bacteriologist will agree that while it is impossible to get a pure primary culture of one organism in 76 per cent. of cases if in reality a mixture is present in the material planted out, imperfect technique is all that is required to enable a mixture of bacteria to grow when in reality only one is present in the material we are intending to examine. I would submit, therefore, that if it is possible to grow a pure culture of one organism from the uterus (which is normally sterile) in 76 per cent. of morbid cases, we have strong evidence that this is really the infecting agent.

Before leaving this section of my paper it is interesting to note that Foulerton and Bonney's 77·5 per cent. of Gram + streptococci and diplococci very closely coincides with our 80 per cent., although they do not appear to have obtained pure cultures in so many cases.

"*Vaccines.*"—Under this heading is indicated whether the case was treated with an autogenous vaccine or whether a "stock" was used—i.e., a vaccine prepared from a culture obtained from another patient. I have wherever possible used an autogenous vaccine. Only where no culture has been obtainable, or where the preparation of an autogenous vaccine is not yet complete, have "stock" vaccines been used. Some cases which have been commenced on a "stock" vaccine, and shown no improvement after several injections, have then been given an autogenous vaccine and have at once responded by a marked fall in temperature and general improvement. I consider, therefore, that an endeavour should be made to obtain an autogenous vaccine from the first in all cases and no valuable time be lost in extensive trials of "stock" vaccines.

With regard to the source from which the vaccine should be made, theoretically an organism obtained from the blood stream is more certain to be the offender than one obtained from the uterus, which is, of course, open more to contaminations. Practically, however, there are some very real advantages in the latter source. Firstly, our figures show a negative result in 60 per cent. of blood culture taken, whereas cultures taken from the uterus are found to give negative results in only about 20 per cent. of cases, and even this could doubtless be reduced if these cultures were always taken by or under the direction of one accustomed to the technique. Secondly, a proportion of blood cultures shows no growth until after two or more days have elapsed. Cultures from the uterus, on the other hand, almost invariably show growth within 24 hours if they are going to grow at all. Further, as the tables show, we can get pure cultures fr om the uterus in 76 per cent. of cases examined, so that in this percentage a vaccine can be prepared within 24 hours of taking our cultures. This is seldom possible from blood cultures, as in them it is only very exceptionally possible to make up a vaccine from the primary culture. I would urge, therefore, that if a case is at all serious, and the uterus is being explored, the opportunity of taking cultures at the same time by some reliable method should never be missed as this may afterwards be an irretrievable loss.

"*Other treatment.*"—Under this heading falls operative interference for the removal of secundines, evacuating pus, &c.; also the administration of antistreptococcus serum. This latter has been given in 18 cases, sometimes in conjunction with and sometimes without vaccines. Of these 18 cases, 7 patients lived and 11 died. We have not noted any cases where antistreptococcus serum appeared by itself to have any marked effect in lowering the temperature or improving the general condition. On the other hand, in one case we have seen antistreptococcus serum given in 20 c.c. doses and repeated for eight doses, and after almost every dose the temperature rapidly ran up from two to three degrees Fahrenheit. This patient eventually recovered after the injections were discontinued. This case very strongly suggested that there was in the serum a distinct toxic element.

"*Results.*"—It is difficult or perhaps even impossible to estimate accurately the benefit derived from any special line of treatment without having for comparison a sufficient number of control cases. These are not at present available.

The present arrangement of the septicæmia ward in this hospital did not exist previously to the commencement of this series of cases, so that it is not possible to obtain a control series from that source.

The 44 cases in this series which have not been treated by vaccines cannot, without reserve, be taken as controls, as they include many mild cases which were not treated because it was considered that they would do well without. In cases where an autogenous vaccine had been prepared it was withheld if the temperature was already falling. Further, as was pointed out by the British Medical Association Committee appointed in 1905 to consider the question of puerperal morbidity, an efficient comparison of the statistics from various hospitals is impossible owing to diversity of standards of morbidity. The standard suggested by that committee includes all cases where the temperature reaches 100° F. on any two of the bi-daily readings from the first to the eighth day after delivery.

Whitridge Williams in a series of 92 cases of puerperal infection had a mortality of 15 per cent., but, as he adds, "our favourable results are probably attributed to the fact that many mild cases are included in our series which would have escaped detection except for the bacteriological examination of the lochia of all febrile cases"; and again, "In my practice such a procedure forms a part of the routine examination in every case presenting a rise of temperature above 101° F."

Perhaps some idea of the type of case we have been dealing with can be gathered from the temperatures. It is, of course, not practicable to show the charts of 100 cases. I have therefore grouped them according to their maximum temperatures, taking the maximum as the highest temperatures which have been reached apart from single rigors.

	Degrees Fahrenheit.	Per cent.
Maximum temperatures	107–108	2·6
" "	106–107	6·6
" "	105–106	32·0
" "	104–105	28·0
" "	103–104	22·6
" "	102–103	6·6

Of the cases with a maximum temperature of between 102° and 103° only one was considered sufficiently grave to require vaccine treatment.

By the courtesy of Dr. Arthur Newsholme I have obtained from the Local Government Board the returns of the last few years of the notified cases of puerperal fever for some 250 odd boroughs and urban districts having a total population of about 19½ millions of people. Calculating from these the mortality per million living, I have compared the figures so obtained with the death-rate from puerperal septic diseases per million living for the whole of England and Wales, obtained from the report of the Registrar-General. From this I find that the mortality of notified cases varies between 57 and 62 per cent. (see Table III.).

TABLE III.

Year.	Boroughs and urban districts.	Population (1901).	Cases of puerperal fever notified.	Cases notified per million living (1901).	Deaths from puerperal septic diseases per million living. England & Wales.	Per-centage mortality amongst notified cases.
1906	258	19,437,867	1467	75·0	47	62·6
1907	257	19,432,397	1394	71·7	41	57·0
1908	259	19,458,754	1323	67·9	39	57·4
1909	258	19,432,190	1357	69·0	40	57·9
1910	253	19,532,548	1340	68·0	—	—

These figures coincide very closely with those published by Dr. Amand Routh in his presidential address to this section last October.[4] Taking the notified cases of puerperal fever and the deaths from puerperal septic diseases in the Administrative County of London during the years 1906–1910 he arrives at the death-rate of 58·7 per cent. In the same

[4] THE LANCET, Oct. 14th, 1911, p. 1055.

TABLE I.—*Cases Treated by Vaccines.*

No.	Nature of labour.	Day of onset.	Rigors.	Cultures.		Vaccines.	Other treatment.	Result.	Complications and remarks.
				Blood.	Uterus.				
1	Primipara; normal.	4th	+	Strepto.	Strepto.	Auto. strepto.	Uterus explored; abscess opened.	Lived.	Pyæmic abscesses; osteomyelitis of femur.
2	Normal.	5th	—	,,	Not done.	,,	Uterus cleared out.	,,	—
3	Primipara; instruments.	2nd	+	,,	Strepto.	,,	Antistreptococcus serum.	,,	—
4	,,	—	+	,,	Not done.	,,	—	,,	—
5	Born before doctor's arrival.	3rd	+	,,	Strepto.	,,	Uterus cleared out; abscesses drained.	,,	Pyæmic abscesses contained pure streptococcus; infarcts in lungs and kidneys.
6	Primipara; normal.	2nd	+	,,	Not done.	Auto. strepto. and coli.	,, ,,	,,	Pyæmic abscesses; coli cystitis.
7	Primipara; post-partum hæm.; retained placenta.	8th	+	,,	Strepto.	Auto. strepto.	Uterus cleared out.	,,	—
8	6 weeks miscarriage.	22nd	+	Strepto. anaerob.	,,	,,	,, ,,	,,	—
9	Primipara; normal.	3rd	+	,,	Not done.	,,	—	,,	Thrombosed veins in legs.
10	Incomplete miscarriage.	—	—	Staph. aur.	,,	Staph. aureus.	Uterus cleared out.	,,	—
11	Retained secundines.	3rd	+	Negative.	,,	Auto. strepto.	Abscesses drained.	,,	Pyæmic abscesses in back, calf, and wrist-joint containing pure streptococcus.
12	Normal.	6th	+	,,	,,	,,	Abscesses drained; knee aspirated.	,,	Vaccine from knee-joint culture; pyæmic knee-joint; parametritic abscess; embolus of retinal artery.
13	Normal; 7½ months.	3rd	+	Not done.	,,	Stock strepto.	Abscesses drained.	,,	Pyæmic abscesses and pulmonary infarcts.
14	Normal.	7th	-	Negative.	Strepto.	Auto. strepto.	Uterus cleared out.	,,	Pleurisy and ? pericarditis.
15	Placenta prævia.	3rd	+	,,	Strepto. and coli.	,,	,, ,,	,,	—
16	2 months miscarriage.	—	+	,,	,,	,,	,, ,,	,,	—
17	Normal.	2nd	+	,,	Strepto.	,,	Uterus explored; laparotomy.	,,	Encysted pus in pelvis.
18	Primipara; normal.	3rd	+	,,	,,	,,	Uterus cleared out.	,,	—
19	Born before doctor's arrival.	3rd	+	,,	,,	,,	,, ,,	,,	—
20	Premature rupture of membranes.	3rd	+	,,	,,	,,	Antistreptococcus serum.	,,	—
21	Primipara; normal.	3rd	-	,,	,,	,,	Uterus cleared out.	,,	—
22	Normal.	—	-	,,	,,	,,	—	,,	Parametritis.
23	Primipara; instruments.	5th	-	Not done.	Not done.	,,	—	,,	Parametritic abscess discharging into bladder.
24	,,	—	+	Negative.	Strepto.	,,	Uterus explored.	,,	—
25	Instruments.	—	+	,,	Not done.	Stock strepto.	—	,,	—
26	3 months miscarriage.	5th	+	,,	,,	,,	—	,,	—
27	Normal.	2nd	+	,,	,,	,,	—	,,	—
28	Primipara; instruments.	3rd	-	,,	,,	,,	Antistreptococcus serum.	,,	—
29	Primipara; normal.	5th	+	,,	,,	,,	—	,,	—
30	6 weeks miscarriage.	—	+	,,	Negative.	,,	Uterus cleared out.	,,	—
31	Normal.	2nd	+	,,	Not done.	,,	,, ,,	,,	—
32	Incomplete miscarriage.	—	-	,,	,,	,,	Laparotomy.	,,	General peritonitis.
33	Normal.	2nd	-	,,	,,	,,	—	,,	—
34	Primipara; normal.	3rd	+	,,	Strepto.	,,	Uterus cleared out.	,,	—
35	Placenta prævia.	2nd	-	,,	Not done.	,,	—	,,	Venous thrombosis in leg.
36	Retained placenta.	3rd	+	,,	Strepto.	,,	Uterus cleared out; abscess opened.	,,	Abscess in abdominal wall; cultures streptococcus and staphylococcus.
37	V.-para; normal.	2nd	+	,,	Not done.		Uterus cleared out.	,,	Temperature fell 12 hours after vaccine; 3 days after uterus was cleared out.
38	IV.-para; retained placenta.	6th	+	,,	,,	,,	—	,,	—
39	Excessive bleeding.	4th	+	Strepto.	Strepto.	Auto. strepto.	Knee joint and abscesses drained.	Died.	P.M.—Pyæmia; endocarditis; venous thrombosis.
40	Normal; seventh month.	2nd	+	,,	,,	,,	Antistreptococcus serum.	,,	One dose stock vaccine; 15 doses antistreptococcus serum. P.M.—Ulcerative endocarditis.
41	3 months miscarriage.	3rd	+	,,	Not done.	,,	Uterus explored; joints drained.	,,	P.M.—Pyæmia.
42	Multip.; normal.	5th	+	,,	Negative.	Stock strepto.	Uterus cleared out.	,,	Died 36 hours after admission. One dose stock vaccine. P.M.—Pus in both knees and one elbow. Purulent endometritis.
43	Ante-partum prolapse.	3rd	—	,,	Not done.	Auto. strepto.	Peritoneal cavity drained.	,,	General peritonitis; empyema.
44	Dead hydrocephalus; 3 days labour.	4th	+	,,	,,	,,	—	,,	Died 48 hours after vaccines commenced. P.M.—Septic thrombosis of uterine vein; pyosalpinx; peritonitis.
45	Primipara; normal.	3rd	+	,,	Negative.	,,	Uterus explored. *Nil* found.	,,	Purulent thrombosis of iliac veins, uterine veins, and vena cava up to level of renal veins.
46	,, ,,	3rd	+	,,	Strepto.	Stock strepto.	Antistreptococcus serum.	,,	Died 24 hours after admission. One dose stock vaccine.
47	Primipara; instruments.	3rd	+	,,	Not done.	,,	,,	,,	Died 24 hours after admission. One dose stock vaccine. Septic thrombosed varicose veins.
48	Incomplete miscarriage.	—	-	,,	,,	,,	Uterus cleared out; laparotomy; antistreptococcus serum.	,,	Pelvic peritonitis; cultures streptococcus.
49	,,	—	-	,,	Strepto.	Auto. strepto.	Uterus cleared out.	,,	P.M.—Cerebral abscess.
50	Primipara; post-partum hæmorrhage.	3rd	-	,,	,,	Stock strepto.	,, ,,	,,	Died 24 hours after admission. One dose stock vaccine.
51	III.-para; adherent placenta.	2nd	-	,,	,,	Auto. strepto.	Placenta removed.	,,	No post mortem. Blood culture 7 days after onset.
52	V.-para; 18 hours labour.	3rd	+	,,	,,	,,	Uterus cleared out.	,,	Temperature normal for 1 week. Patient up 2 days. Death from (?) heart failure or detached thrombus. No post mortem.
53	2 months abortion.	7th	+	Negative	Not done.	Stock strepto.	,, ,,	,,	One dose stock vaccine. P.M.—Ulcerative endocarditis. Infarcts in spleen and kidneys. Hypopyon.
54	Primipara; instruments.	4th	-	,,	,,	,,	Peritoneum drained by vagina.	,,	Died 48 hours after admission. One dose stock vaccine. No post mortem.
55	Primipara; instruments.	9th	+	,,	Strepto.	Auto. strepto.	Uterus cleared out.	,,	P.M.—Purulent endometritis.
56	Normal.	3rd	+	,,	Not done.	Stock strepto.	,, ,,	,,	P.M.—Empyema.

TABLE II.—*Cases Untreated by Vaccines.*

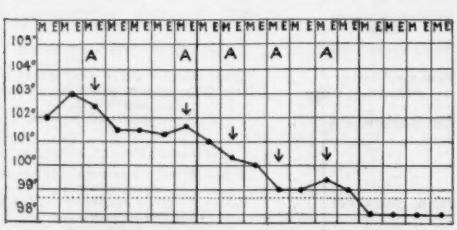
No.	Nature of labour.	Day of onset.	Rigors.	Cultures.		Vaccines.	Other treatment.	Result.	Complications and remarks.
				Blood.	Uterus.				
57	Normal.	4th	+	Strepto.	Not done	*Nil.*	Uterus explored; antistrept. serum.	Lived.	—
58	Primipara; instruments.	3rd	+	? Gonococcus.	,,	,,	Uterus explored.	,,	Pneumonia; blood-culture, Gram-diplococcus, failed to grow in subculture.
59	Primipara; ruptured perineum.	3rd	–	Negative.	Strepto.	,,	Uterus cleared out.	,,	Temperature fell rapidly after clearing out uterus.
60	Three months miscarriage.	—	–	Not done.	,,	,,	,, ,,	,,	,, ,, ,,
61	Two months miscarriage.	3rd	–	Negative.	Negative.	,,	,, ,,	,,	,, ,, ,,
62	Normal.	7th	–	Not done.	Strepto.	,,	,, ,,	,,	,, ,, ,,
63	Post-partum hæmorrhage.	2nd	–	Negative.	Not done.	,,	,, ,,	,,	Mild case; retained placenta.
64	Normal.	7th	–	,,	,,	,,	,, ,,	,,	Abscess in thigh at site of ergot injection.
65	Four months miscarriage.	4th	+	,,	,,	,,	Abscess drained.	,,	Abscess at side of sacrum.
66	Three months miscarriage.	18th	+	,,	Negative.	,,	Uterus cleared out.	,,	Temperature fell rapidly.
67	Normal.	2nd	+	,,	Strepto.	,,	,, ,,	,,	,, ,, ,,
68	,,	3rd	–	,,	Contaminated.	,,	—	,,	—
69	Two months miscarriage.	4th	+	,,	Not done.	,,	—	,,	Thrombosed veins in leg.
70	Normal.	3rd	–	,,	,,	,,	Credé ointment.	,,	—
71	Incomplete miscarriage.	—	–	,,	Staph. alb.	,,	Uterus cleared out.	,,	Temperature fell rapidly.
72	Instruments.	2nd	–	,,	Not done.	,,	—	,,	—
73	Primipara; normal.	7th	–	,,	,,	,,	Antistreptococcus serum.	,,	Laceration of cervix; mild case.
74	Normal.	3rd	+	,,	,,	,,	Uterus cleared out; antistrept. serum.	,,	Mild case.
75	,,	8th	+	,,	,,	,,	Antistreptococcus serum.	,,	Laceration of cervix; mild case.
76	Criminal abortion.	—	+	,,	,,	,,	—	,,	Mild case.
77	Normal.	1st	+	Strepto.	,,	,,	Uterus cleared out.	Died.	P.M.—Abscess in broad ligament; peritonitis.
78	,,	4th	–	,,	,,	,,	—	,,	P.M.—Thrombosis left internal and common iliac veins.
79	Primipara; normal.	2nd	–	,,	,,	,,	—	,,	Septic broncho-pneumonia.
80	Incomplete miscarriage.	2nd	+	,,	,,	,,	Uterus cleared out.	,,	P.M.—Endocarditis; peritonitis; septic embolus in lung.
81	Three months miscarriage.	2nd	+	,,	,,	,,	—	,,	P.M.—Pelvic cellulitis; thrombosis of ovarian veins; pyæmic abscesses in lungs.
82	Instruments.	2nd	–	,,	,,	,,	—	,,	P.M.—Peritonitis.
83	Born before doctor's arrival.	—	–	,,	,,	,,	—	,,	P.M.—Osteomyelitis of pubic bones.
84	Incomplete miscarriage.	2nd	–	,,	,,	,,	Antistreptococcus serum.	,,	P.M.—Sloughing endometritis; peritonitis.
85	Primipara; instruments.	4th	+	,,	Strepto.	,,	Uterus cleared out.	,,	No post-mortem examination.
86	Multipara.	2nd	–	,,	Not done.	,,	Peritoneal cavity drained.	,,	Pure streptococci in peritoneal pus. Died 20 hours after admission; second day after onset.
87	Incomplete miscarriage.	3rd	+	,,	,,	,,	Uterus cleared out.	,,	P.M.—Recent endocarditis.
88	Primipara; normal.	6th	+	,,	,,	,,	—	,,	No post-mortem examination.
89	Criminal abortion.	5th	+	Staph. aur.	,,	,,	—	,,	P.M.—Pyæmic abscesses in lungs and myocardium.
90	Retained secundines.	17th	+	Negative.	,,	,,	Uterus cleared out.	,,	P.M.—Purulent parametritis; thrombosis of internal iliac veins.
91	Normal.	2nd	+	,,	Negative.	,,	Uterus cleared out; antistrept. serum.	,,	P.M.—Purulent endometritis; salpingitis; abscess in left ovary.
92	Instruments.	2nd	+	,,	Strepto.	,,	Uterus cleared out.	,,	Died 24 hours after admission.
93	Retained secundines.	—	+	,,	,,	,,	,, ,,	,,	Pericarditis.
94	Primipara; instruments.	2nd	+	,,	Not done.	,,	—	,,	Almost moribund on admission. P.M.—Thrombosis of uterine and ovarian veins.
95	Post-partum hæmorrhage; retained placenta.	2nd	–	,,	,,	,,	Uterus explored; nothing found.	,,	P.M.—Septicæmia; pyæmic abscesses in kidneys.
96	Four months miscarriage.	3rd	+	,,	Cocci seen, *nil* grew.	,,	Uterus cleared out.	,,	Numerous rigors for nine days before death.
97	Primipara; normal.	3rd	–	,,	Strepto.	,,	Antistreptococcus serum.	,,	General peritonitis and empyema.
98	Six weeks miscarriage.	20th	+	,,	Not done.	,,	Uterus explored; antistrepto. serum.	,,	Numerous rigors.
99	Four months miscarriage.	—	+	,,	Negative.	,,	Uterus cleared out; abscesses drained.	,,	Parametritic abscess.
100	Eight months stillborn.	8th	+	,,	Not done.	,,	Uterus cleared out.	,,	Cystitis; numerous rigors.

paper Dr. Routh gives another table showing that for the first six months of 1911 there were 145 cases notified in the Administrative County of London, having a death-rate of 46·9 per cent. It is interesting to note that in the same period there were in the London Hospital 28 cases notified (and therefore included in Dr. Routh's figures), having a death-rate of 25 per cent.

The mortality shown in Table III. appears to coincide fairly accurately with the mortality amongst the untreated cases in the series we are considering, namely, 55 per cent., if we remember that amongst these are included an excess of the milder cases which reduce the mortality. I desire, however, without placing too much importance on these figures, to put our results on record and to indicate briefly what appear to me to be justifiable conclusions.

Of the 56 cases treated 38 lived while 18 died, giving a mortality of 32 per cent. Of the 44 cases untreated 20 lived while 24 died, giving a mortality of 55 per cent. As I have already stated, these are not strictly comparable cases, as those untreated include on the one hand a few of the severest cases where death occurred before any specific treatment could be commenced, and on the other hand many comparatively mild cases. The bias, however, is rather towards lowering the mortality amongst the uninoculated owing to the excess of the mild cases. More valuable evidence can, however, be obtained if we consider those cases only in which there was definite bacteriological evidence of a blood infection. By this I mean either a positive blood culture or pyæmic abscesses from which a streptococcus was obtained in pure culture. Amongst those treated there were 28 such cases, Nos. 1–13 and 39–53. No. 52 did well for a time and had a normal temperature for a week. She was then allowed up. On the second day of getting up she was suddenly taken ill and she died in half an hour from heart failure. I omit this case therefore from my figures. Of the other 27 cases 13 lived (1–13) and 14 died (39–51 and 53), giving a mortality of 52 per cent. It should be noted that amongst these 27 cases counted as treated are included 6 which only received a single dose of a vaccine within 24 hours of death.

Turning now to the similar series of untreated cases, we have 16 examples—Nos. 57, 58, 77–89, 95. Of these, 2 lived (57, 58) and 14 died (77–89, 95), giving a mortality of 87·5 per cent. Further, if we confine ourselves to streptococcal cases we have 12 out of 13 cases untreated dying—mortality, 92 per cent. It would appear, therefore, that treatment by inoculation with vaccines in this series of cases has reduced the mortality by 30–40 per cent. How far this will be borne out in larger series of cases will be seen in the future, but



Temperature chart of Case 15, showing the mean of six 4-hourly temperatures and spacing of injections of vaccine. (A A mark injections of vaccine.)

these figures suggest that the benefit is sufficient to justify a continued and more extended trial of the treatment.

The length of time occupied in the treatment of these cases is a question which doubtless will be inquired about.

Roughly speaking, it appears from our series that the cases may be divided into three groups:—

1. Those which respond at once to an inoculation of a vaccine, the temperature falling to normal within 48 hours. Case 3 is a good example of this. Previously to inoculation there were streptococci in the blood stream and the temperature had varied between 101° and 104° F. for four days. Following on the first inoculation the temperature fell; within 24 hours the maximum was 102°, and in 48 hours it was normal. Recovery was uninterrupted.

2. They may respond to each of a series of injections, the average of the six 4-hourly temperatures falling a degree or so. Case 15, a chart of which is given, shows this well.

3. The temperature may steady until the daily maximum is not above 102°. Further injections fail to reduce this. In these cases there is probably a local collection of pus which must be found and drained; the temperature will then quickly fall to normal. No. 12 illustrates this well. Previously to inoculation the patient had 17 rigors in 16 days; the daily temperatures varied between 100°–106°. After the first injection the rigors ceased entirely, and the temperature subsided until the daily maximum was 102°. It remained thus for some three weeks, further injections having no influence. An abscess then pointed in the buttock. Immediately on opening and draining it the temperature fell to normal and did not rise again.

Conclusions.

1. The mortality amongst those cases of puerperal septicæmia in which there is definite bacteriological evidence of bacteria in the blood stream is from 85 to 95 per cent.

2. This mortality may by inoculation with autogenous vaccines be reduced to about 55 per cent.

3. The mortality amongst notified cases of puerperal fever is about 60 per cent.

4. This mortality may by inoculation with appropriate vaccines be reduced to about 30 per cent.

5. In cases of puerperal sepsis, if it is decided to explore the uterine cavity the opportunity should not be lost of obtaining a culture at the same time.

6. In the treatment of puerperal sepsis "stock" vaccines give inferior results, and should only be used when an autogenous vaccine cannot be obtained.

I desire, in conclusion, to express my thanks to Dr. Russell Andrews, under whose care the majority of the cases have been; also to some other members of the staff of the London Hospital for permission to make use of cases under their care. Further, my thanks are due to Dr. W. Bulloch, in whose laboratory I have carried out this work.

York-street, W.

THE FINSBURY MEDICAL SOCIETY AND THE SHOREDITCH AND FINSBURY TUBERCULOSIS DISPENSARY.—The members of the Finsbury Medical Society have entered a protest against the formation of this dispensary on personal and general grounds. They consider that as soon as a decision was made to establish a dispensary in the neighbourhood a meeting of the whole of the medical profession of the district should have been called, so that the methods upon which the institution was to be worked could be explained to them and discussed. But they feel that, apart from personal feeling, there are reasons why they should object to give their coöperation to the Shoreditch and Finsbury Dispensary at the present time. When the National Society for the Prevention of Consumption first began to ask for public assistance in promoting tuberculosis dispensaries there was no National Insurance Act and no compulsory notification of phthisis. It is clearly stated in the Insurance Act that some such scheme as a tuberculosis dispensary should be established, and they point out that directly an insured person or any of his dependants is certified to be tuberculous, he can no longer claim "medical benefit," and is at once transferred to "sanatorium benefit," when the Government in return for contributions which have been paid has undertaken to provide treatment. If the Commissioners decide to recognise the existing tuberculosis dispensaries and finance them it is probable that the medical officers will be called upon to give expert opinion as to whether a compulsorily certified case is a suitable one for treatment in a sanatorium. The medical officer of the dispensary may feel it his duty to examine all contacts, and so draw numerous young people not yet insurable into the meshes of the dispensary for treatment. The question to be answered is, Under whose control shall the management of these dispensaries be:—(1) outside voluntary agency; (2) municipal control; or (3) local medical practitioners? The members of the Finsbury Medical Society came to the conclusion that the local practitioners should staff the dispensaries themselves, with the assistance of a resident medical officer. "It is time," they add, "that the idea that a general practitioner has forgotten all the medicine he ever learned was exploded."

THE VACCINE TREATMENT OF SIMPLE GOITRE.*

BY ROBERT McCARRISON, M.D. R.U.I., M.R.C.P LOND.,
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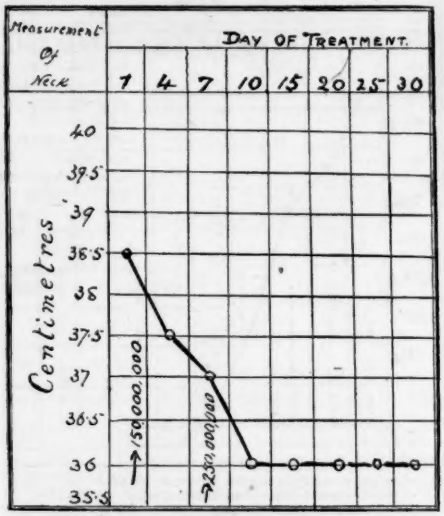
HAVING shown in the course of my researches on the etiology of endemic goitre that the infecting agent of this disease exists in the intestinal tract, and that a plentiful amœbic infection was present in this situation in the vast

CHART 1.



Showing measurements of neck at various stages of treatment, also doses and times of administration of vaccine.

majority of all cases of goitre in Gilgit,†[1 2 3] I have been engaged in endeavouring to cultivate amœbæ from the fæces of sufferers from this disease. During the course of this work I was struck with the constant character of the bacillary growths which appeared in the medium I employed. This medium was that recommended by Musgrave[4] for the cultivation of amœbæ and has the following composition: Beef extract 0·5 gramme, sodium chloride 0·5 gramme, agar

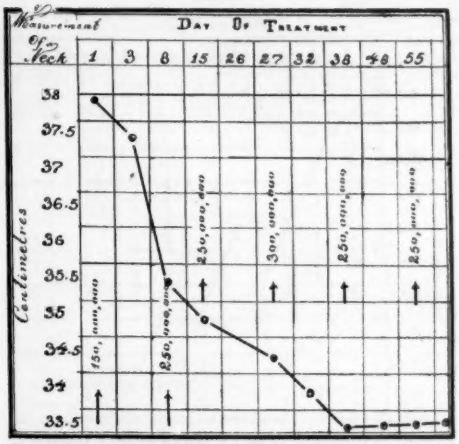
FIG. 1. FIG. 2.

Case 5. Diminution in circumference of neck = 2·5 centimetres.

20 grammes, tap water 1000 c.c., and is of an alkalinity of minus 1. It occurred to me to prepare a vaccine from such bacteria as grew on this medium and to employ it, as an experimental procedure, in the treatment of recent cases of goitre. At this stage of my investigations no attempt was made to isolate any particular organism. The vaccine employed was, therefore, a composite one and contained organisms capable of growth on an alkaline and feebly nitrogenous medium. This vaccine was administered in selected cases in doses of from 150,000,000 to 350,000,000; the inoculations were made at intervals of from seven to ten days. The results obtained were most striking. The following cases (Nos. 5 and 10) will serve as illustrations.

CASE 5.—Age of patient: 19 years. Occupation: water-carrier. Type of goitre: uniform parenchymatous. Circumferential measurement of neck over the goitre: 38·5 centimetres. Duration of disease: 6 weeks. Treatment: composite vaccine prepared from organisms grown on Musgrave's medium from his own fæces. Number of inoculations: 2. Duration of treatment: 10 days. Result: complete disappearance of the goitre. Final measurement of neck: 36 centimetres. Diminution

CHART 2.

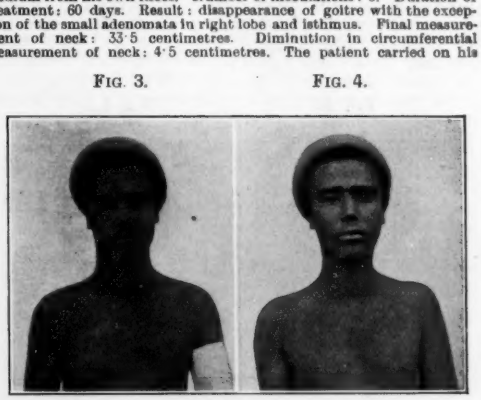


Showing measurements of neck at various stages of treatment, also doses and times of administration of vaccine.

in circumferential measurement of the neck: 2·5 centimetres. The patient carried on his work as regimental water-carrier during the whole course of treatment. (Chart 1, Figs. 1 and 2.)

CASE 10.—Age of patient: 19 years. Occupation: coolie. Type of goitre: parenchymatous, two small adenomata in right lobe and one in isthmus. Circumferential measurement of neck over the goitre: 38 centimetres. Duration of disease: 2 years approximately. Treatment: composite vaccine prepared from organisms grown on Musgrave's medium from his own fæces. Number of inoculations: 6. Duration of treatment: 60 days. Result: disappearance of goitre with the exception of the small adenomata in right lobe and isthmus. Final measurement of neck: 33·5 centimetres. Diminution in circumferential measurement of neck: 4·5 centimetres. The patient carried on his

FIG. 3. FIG. 4.



Case 10. Diminution = 4·5 centimetres.

work as a coolie during the whole course of treatment. (Chart 2, Figs. 3 and 4.)

It was then noted that the bacterial growth on the medium referred to was composed, as a rule, almost wholly of a bacillus which presented the characteristics of the coli group. This bacillus differed, however, from the typical "bacillus coli" in so far that it did not produce indol, and that it decolourised the litmus on a saccharose medium instead of reddening it. I am indebted to Major W. F. Harvey, I.M.S., of the Pasteur Institute of Kasauli, for working out the characteristics of this organism.

A vaccine was prepared from the bacillus, and I employed

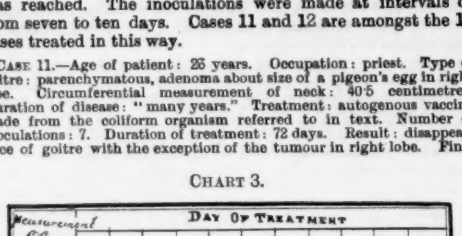
* A paper read before the Medical Section of the Royal Society of Medicine on Jan. 23rd, 1912.

† The superior figures throughout the article relate to the bibliography at the end.

it in 16 selected cases of goitre. The initial dose was in each case 150,000,000. The dose was gradually increased by 50,000,000 till in some cases a maximum dose of 350,000,000 was reached. The inoculations were made at intervals of from seven to ten days. Cases 11 and 12 are amongst the 16 cases treated in this way.

CASE 11.—Age of patient: 26 years. Occupation: priest. Type of goitre: parenchymatous, adenoma about size of a pigeon's egg in right lobe. Circumferential measurement of neck: 40·5 centimetres. Duration of disease: "many years." Treatment: autogenous vaccine made from the coliform organism referred to in text. Number of inoculations: 7. Duration of treatment: 72 days. Result: disappearance of goitre with the exception of the tumour in right lobe. Final measurement of neck: 36 centimetres. Diminution in circumferential measurement of neck: 4·5 centimetres. This man, prior to treatment, acted as a control to the previous case (Case 10); while so acting his goitre increased somewhat in size. (Chart 3, Figs. 5 and 6.)

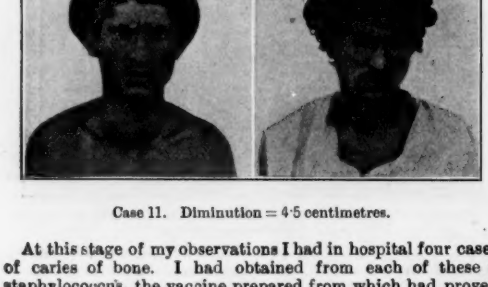
CHART 3.



Showing measurements of neck at various stages of treatment, also doses and times of administration of vaccine.

CASE 12.—Age of patient: 23 years. Occupation: milkman. Type of goitre: uniform parenchymatous; small nodular mass in isthmus. Circumferential measurement of neck: 42 centimetres. Duration of disease: "about one year." Treatment: vaccine from Case 11. Number of inoculations: 7. Duration of treatment: 56 days. Result: complete disappearance of the goitre with the exception of the small nodular mass in isthmus. Final measurement of neck: 37·5 centimetres. Diminution in circumferential measurement of neck: 4·5 centimetres. The patient followed his usual avocations during the whole course of treatment. (Chart 4, Figs. 7 and 8.)

FIG. 5. FIG. 6.



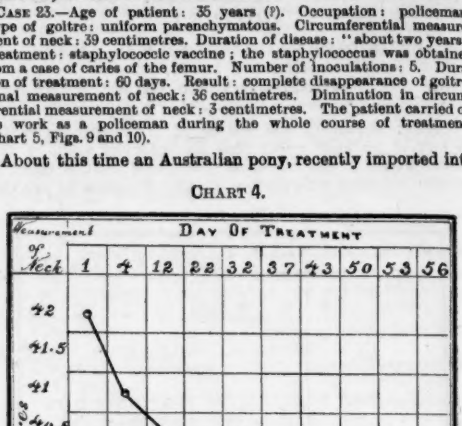
Case 11. Diminution = 4·5 centimetres.

At this stage of my observations I had in hospital four cases of caries of bone. I had obtained from each of these a staphylococcus, the vaccine prepared from which had proved highly efficacious in causing the bone to heal and the sinuses to close. It occurred to me to use this staphylococcic vaccine in the treatment of goitre. I consequently administered it in four cases. The initial dose was in each case 250,000,000; the inoculations were made at intervals of a week to ten days. In two cases the result was practically *nil*, but these were cases—one adenomatous, the other cystic—in which no form of medicinal treatment could have been of use. The other two cases, however, responded to the treatment in a highly satisfactory way. The following (Case 23) is one of these cases.

CASE 23.—Age of patient: 35 years (?). Occupation: policeman. Type of goitre: uniform parenchymatous. Circumferential measurement of neck: 39 centimetres. Duration of disease: "about two years." Treatment: staphylococcic vaccine; the staphylococcus was obtained from a case of caries of the femur. Number of inoculations: 5. Duration of treatment: 60 days. Result: complete disappearance of goitre. Final measurement of neck: 36 centimetres. Diminution in circumferential measurement of neck: 3 centimetres. The patient carried on his work as a policeman during the whole course of treatment. (Chart 5, Figs. 9 and 10).

About this time an Australian pony, recently imported into

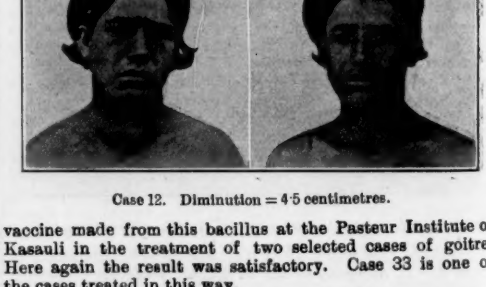
CHART 4.



Showing measurements of neck at various stages of treatment, also doses and times of administration of vaccines.

Gilgit, was found to be suffering from goitre. The swelling was right-sided, about the size of a hen's egg, and was of not more than three weeks' standing. I isolated from the fæces of this animal a spore-bearing organism, the characters of which I have recorded in another place.[5] This organism was also commonly met with in cultures made from human fæces. Having satisfied myself, by the inoculation of small quantities of live cultures into animals, that its introduction under the skin gave rise to no ill effects, I employed a

FIG. 7. FIG. 8.



Case 12. Diminution = 4·5 centimetres.

vaccine made from this bacillus at the Pasteur Institute of Kasauli in the treatment of two selected cases of goitre. Here again the result was satisfactory. Case 33 is one of the cases treated in this way.

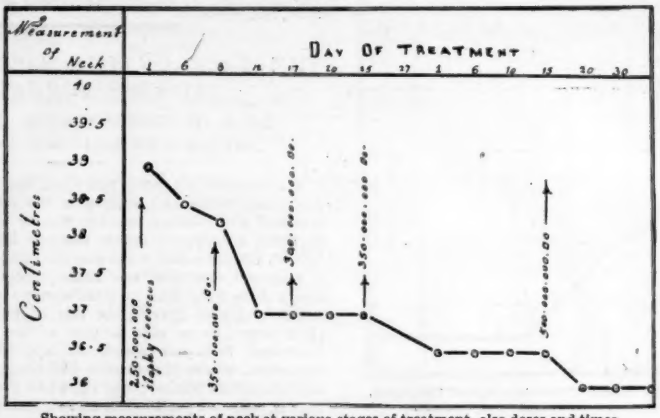
CASE 33.—Age of patient: 23 years. Occupation: cultivator. Type of goitre: parenchymatous; two small tumour masses in right lobe. Circumferential measurement of neck: 41 centimetres. Duration of disease: "over a year." Treatment: vaccine prepared from spore-bearing organism referred to in text. Number of inoculations: 4. Duration of treatment: 40 days. Result: disappearance of goitre with exception of two tumour masses in right lobe. Final measurement of neck: 37·5 centimetres. Diminution in circumference of neck: 3·5 centimetres. The patient carried on his work as a cultivator during the whole course of treatment. (Chart 6, Figs. 11 and 12.)

Forster's dysentery vaccine was then tried in two cases,

but without any beneficial result. One of these subsequently responded to vaccine with the composite vaccine referred to at the beginning of this paper.

I have treated 33 cases of simple goitre by means of vaccine. The cases were selected cases. The results observed may be summarised as follows. Of the four vaccines which were successfully employed the "composite" vaccine appears to be the best, though, as will be seen from the photographs and charts which illustrate this paper, the other three vaccines have given excellent results. I have found an initial dose of 150,000,000 to be most suitable in the case of the composite vaccine and in the case of that prepared from the coliform bacillus referred to. There is usually some rise of temperature a few hours after the inoculation, but this is rarely of any severity if the initial dose does not exceed 150,000,000. Subsequent dosage can be readily regulated by the effect of the treatment on the enlarged thyroid. When the gland begins to soften and the skin over it to become lax the dose which has brought about the result will not need to be increased at subsequent inoculations. I believe, also, that the volume of the vaccine inoculated should be small, and that it is better to introduce 150,000,000 of the bacteria in 5 minims of salt solution than in 1 cubic centimetre of the same. The local reaction does not then appear to be so marked, and when the upper arm is selected as the site of inoculation the patient is usually able to follow his ordinary avocation with no more loss of time than that necessary to attend at the laboratory for the treatment.

CHART 5.



Showing measurements of neck at various stages of treatment, also doses and times of administration of vaccines.

Cases vary considerably as to the number of inoculations which are necessary to effect a cure. As a general rule, it may be said that the older the goitre the larger the number of inoculations which will be needed. I have had several cases in which the thyroid swelling has entirely disappeared after two or three inoculations (Case 5, Figs. 1 and 2). As a rule, however, from four to seven inoculations were found to be necessary.

This treatment is suitable for cases of recent parenchymatous goitre, and its value is confined to such cases. It has little or no effect where the goitre is of long standing—that is to say, when the main part of the swelling is made up of adenomata or of cysts. In some cases a shrinking of the thyroid tissue around adenomatous or cystic masses is observed, but no diminution in the size of these masses has been noted to occur.

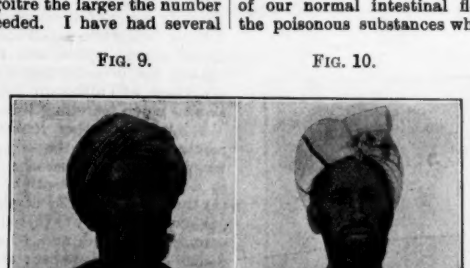
All my patients have commented on the feeling of *bien être* to which this treatment gives rise, and so popular had it become—by reason of its simplicity and its freedom of restrictions of diet, &c.—before I left Gilgit, that my last five or six cases asked for it in preference to any other. I have usually employed an autogenous vaccine, though I have obtained excellent results by using the vaccine of one patient for the treatment of another (Case 12, Chart 4, Figs. 7 and 8).

With this treatment—as with the treatment of goitre by thymol, iodine, or the bacillus bulgaricus—the patients, as a rule, lose flesh and the skin becomes of a healthier tint. I am of opinion that the loss of flesh is to be thus explained. The toxic agent of the disease is destroyed or inhibited in its action by the vaccine or by the internal medication; in consequence, the secretion of the hypertrophied organ is for a time in excess of the demand. The excess of secretion, therefore, which continues to be thrown into the blood stream, until such times as the gland regains its normal equilibrium, exerts its influence in increasing the metabolic processes of the body and a loss of subcutaneous fat is the result.

It will, perhaps, be remembered that I have produced goitre experimentally in man by the administration of matter separated from a goitre-producing water by means of a Berkefeld filter.[23] I repeated this experiment in five young men whose goitres had been cured by vaccination. In no case did the thyroid gland show the slightest increase in size, though the five individuals consumed the "suspended matter" for a period considerably longer than the subjects of my original experiments. It is possible, therefore, that these men may have been in some measure protected by this vaccination, since having once suffered from goitre they would have been more likely to acquire it than individuals who had not been previously so afflicted.

Now there arises out of this treatment of simple goitre the problem that vaccines prepared from no less than three bacteria—namely, a coliform bacillus, a spore-bearing bacillus, and a staphylococcus—have been employed with success in causing the hypertrophied thyroid to return to its normal size. The solution, I believe, is to be found in an application of Metchnikoff's discovery that certain microbes of our normal intestinal flora are harmful by reason of the poisonous substances which they produce in the intestines. These organisms are of the coli group, certain spore-bearing organisms, and the staphylococcus. By their action on proteid food-stuffs they produce poisons—indols and phenols—which are absorbed by way of the intestinal wall and give rise to fibrotic changes in the liver, kidneys, and arteries. It did not occur to Professor Metchnikoff to note the action of these poisons on the thyroid gland, though he concluded that they exercised a harmful influence on most of the organs of the body.[9]

FIG. 9. FIG. 10.



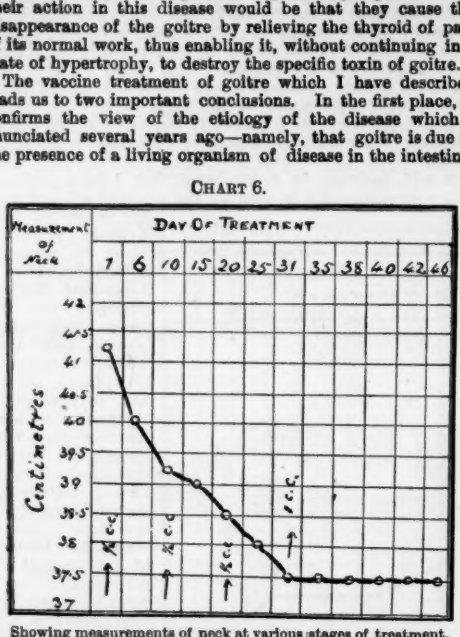
Case 23. Diminution = 3 centimetres.

The vaccines which I have employed were prepared from organisms similar to these normal and harmful inhabitants of the intestines. There is at present no evidence that any one of these possesses a specific influence in the production of goitre. The conclusion, therefore, is suggested that the thyroid gland is called upon to combat several poisons normally present in the human intestine. When to these is superadded the specific virus of goitre an abnormal element is introduced and an extra strain is thrown upon the gland. Unassisted, it undergoes hypertrophy in many cases, but if assisted in any one direction it is capable of performing the additional task which has been imposed upon it and of combating the abnormal virus. On the assumption

that no one of the different vaccines which I have employed contains the specific organism of goitre my explanation of their action in this disease would be that they cause the disappearance of the goitre by relieving the thyroid of part of its normal work, thus enabling it, without continuing in a state of hypertrophy, to destroy the specific toxin of goitre.

The vaccine treatment of goitre which I have described leads us to two important conclusions. In the first place, it confirms the view of the etiology of the disease which I enunciated several years ago—namely, that goitre is due to the presence of a living organism of disease in the intestinal

CHART 6.

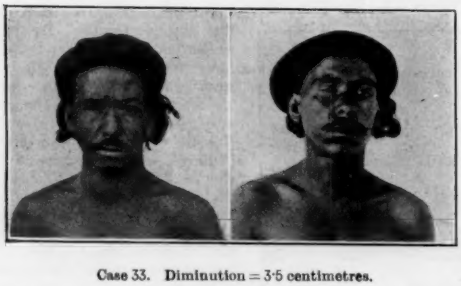


Showing measurements of neck at various stages of treatment, also doses and times of administration of vaccines.

tract[1,2]; and secondly, it demonstrates that the thyroid gland is markedly influenced by the nature of the bacterial flora of the intestine, and that one of its chief functions is to protect the body from the many toxic substances which find their way into the blood stream from the alimentary tract. This latter conclusion is substantiated by some experimental work which I have lately published.[5] The experiments show that the thyroid glands of goats undergo marked changes as a result of the continued contamination of their food with cultures of micro-organisms grown from the fæces of goitrous individuals.

Now, apart from the significance which attaches to the action of vaccines on the hypertrophied thyroid when

FIG. 11. FIG. 12.



Case 33. Diminution = 3·5 centimetres.

considered in relation to the etiology of goitre, I desire to emphasise the importance of the antitoxic action of the thyroid mechanism. Assuming the accuracy of the second of my conclusions, we at once appreciate the *raison d'être* of this mechanism in the human economy. We realise that the gland undergoes hypertrophy as the result of a definite stimulus, which is commonly toxic material absorbed from the alimentary tract, and also that the enlargement is not an evidence of derangement of the organ's function, but of its effort to resist some toxic agency. For my own part, I believe that the nervous and other degenerative changes which follow as a result of thyroid incompetency are due to the action of poisonous substances absorbed chiefly from the alimentary canal. These poisons, by reason of the functional imperfection of the thyroid, are allowed free play on the unprotected tissues of the body, and such conditions as tetany, cretinism, and myxœdema are the result.

I claim that my researches on the etiology of goitre have established the importance of the antitoxic action of the thyroid mechanism and I would venture to suggest that future researches upon its diseases should take this action as their fundamental basis.

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THE FATE OF THE APPENDIX AFTER ABSCESS FORMATION.[1]

BY A. P. DODDS-PARKER, F.R.C.S. ENG.,
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WHEN some six years ago I had the honour of opening a discussion before this society on the treatment of appendicitis, and after stating that the aim of the surgeon should be to drain an abscess rather than to look for the appendix, Dr. W. Collier asked what was the condition of the appendix if a second operation was subsequently performed. To this query there were then no satisfactory replies. I said I would, however, try to investigate this as being very important—(1) in order to be able to give advice to patients who had recovered from an attack of appendicitis with abscess formation, where the abscess had been successfully drained, and the cavity healed; and (2) what the advice should be—that is, was one justified in allowing the patients to continue with the appendix still *in situ* without warning them of the possible dangers connected with this state of affairs?

At the time Dr. Collier raised this question I could but quote Sir Frederick Treves, who in the "Text-book of Surgery," vol. ii., p. 628 (1898), says: "As a matter of fact, after an abscess has once formed very little more is heard of the appendix." Since this date I have been able to collect 17 consecutive cases for analysis, which are tabulated in the accompanying table.

I must here apologise for not having all the appendices, too, for inspection, but owing to an accident the jar in which they were stored has been disturbed and most of the labels became displaced. The consequence is, we were unable to identify many of them when going over the appendices, and I think it is wiser to tell the truth than produce a number of these organs which one cannot vouch for. As you will realise, the investigation has taken a long time, lasting over six years, and although the result seems small it has necessitated much searching through notes in hospital.

I have altogether looked over 250 cases, and the first result one sees is the comparatively small number of cases which have had abscesses opened and drained, and gone on to a subsequent operation. This is to be accounted for by: (1) the great majority of the cases one now sees are either (*a*) acute and early or (*b*) quiescent, with operation of appendectomy performed, and, of course, these do not come under discussion in this paper; and (2) the difficulty of persuading hospital patients to return for a second operation after they leave the institution convalescent and feeling no symptoms of their former complaint. The number of private cases was large, and is to be accounted for in this manner. I find the private patient much more inclined to take one's advice than is the hospital patient, who so often thinks one wishes to "experiment" on him.

Before I take up in detail the table of cases I think it will be interesting to mention the literature on this subject. I will at once state that it is, as far as I can find out, scanty in the extreme.

At a discussion raised on the subject at the Royal Medical and Chirurgical Society[2] in 1905 Sir Frederick Treves is reported as saying: "I was at one time disposed to think

[1] A paper read before the Oxford Medical Society on Dec. 8th, 1911.
[2] Transactions of the Royal Medical and Chirurgical Society, vol. lxxxviii., p. 429.

the patient who had had a perityphlitic abscess was, *ipso facto*, cured of his malady, and that although he might have further trouble with the abscess he need fear no other attack of definite appendicitis. Longer experience has shown this assumption is not correct." (*Vide* Nos. 9, 8, and 6.) Sir Douglas Powell at the same discussion says: "If a diseased appendix is left behind there is a great risk of abscess formation and general peritonitis, with 25 per cent. mortality compared with 2 per cent. for simple operation."

Battle, in THE LANCET of July 4th, 1908, p. 79, states it is much more to the point to produce evidence which will carry weight with the unprejudiced observer of the present time, based on clinical and pathological grounds, and quotes seven cases in his paper (Jan. 18th, 1902).

In Kelly's book on appendicitis—a large and elaborate treatise—I can find no mention of the subject, nor in most of the journals or other books I have looked up. However, in the most recent "Operative Surgery" at the Radcliffe Infirmary I find an important paragraph written by G. H. Makins in Burghard's "System of Operative Surgery" (vol. ii., p. 492). He says: "The appendix can rarely be removed simultaneously with incision and drainage of an abscess. The significance of the appendical abscess as an indication for subsequent appendectomy has been much discussed. It has been asserted that the local abscess protects

Table of Analyses of 17 Consecutive Cases—1905 to 1910.

No.	Age.	History of attacks.	Nature of primary operations.	Nature of final operation.	Condition of appendix.	Result.	Remarks.
1	34	No history of previous attack before abscess formation. Operation for abscess 14 days after onset of symptoms.	Abscess formation. Drained. Pus about ℥ iv. evacuated.	Rectus route. Appendix found and removed. Adhesions.	Little destruction of appendix. End bulbous.	Recovery.	Went out 3 weeks after final operation.
2	27	Onset of symptoms 10 days before operation.	Abscess formation. Drained. Pus ℥ i evacuated.	Discharging sinus, rectus route. Appendix found and removed. Firm adhesions to iliac crest.	No destruction of appendix.	,,	Discharged 3 weeks after final operation.
3	21	Large pelvic abscess 14 days after first attack.	Abscess formation. Drained per rectum, Jan., 1906.	Rectus route. Appendix found and removed by abdominal route.	Little destruction of appendix. Strong adhesion to bladder.	,,	—
4	12	No previous attack. Pain for 14 days.	Abscess formation. Drained. Small quantity of pus evacuated.	Rectus route. Appendix found and removed. Some adhesions.	No destruction of appendix.	,,	Discharged 3 weeks after final operation.
5	14	Six days' pain before he was operated on for abscess.	Abscess formation. Drained. Right iliac fossa drained on April 30th. Left iliac fossa drained on May 2nd.	Rectus route. Appendix found and removed. Adherent at tip.	,,	,,	Discharged 4 weeks after final operation.
6	20	In 1902 had serious peritonitis at school. Second attack 5 years after in Switzerland.	Peritonitis and abscess formation. Drained.	Quiescent stage. Appendix found and removed. Adherent to scar of old wound. Ventral hernia operation.	Appendix not in any way destroyed.	,,	Ventral hernia cured by muscle sliding at same time.
7	21	Four days ill.	August 1st, abscess opened and drained. Not much pus.	Rectus route. Appendix found and removed 25 days after draining. Adherent.	No destruction of appendix.	,,	Discharged 24 days after final operation.
8	30	First attack August, 1905. Refused operation. Large pelvic abscess burst per rectum, 1907. Second attack no abscess.	No operation in first two attacks, but abscess burst per rectum in first attack.	1908, Acute attack. Appendix found and removed. Strong adhesions into pelvis.	,,	,,	—
9	14	Three days' history of pain before first operation.	Two attacks of abscess formation, both treated by drainage.	After subacute attack, in quiescent stage, appendix found and removed. A few adhesions.	No real destruction of appendix, which was lying behind cæcum and adherent in pelvis.	,,	Ventral hernia cured by muscle sliding. This case was operated upon twice.
10	14	Abscess one year previously, treated at W——.	? Drainage.	Ventral hernia. Appendix found and removed, pointing retrocæcally.	No destruction of appendix.	,,	Discharged 30 days after final operation. Ventral hernia cured at same time by muscle sliding.
11	9	Attack in 1909 with abscess formation.	Opened and drained.	Appendix found and removed. Adhesion at apex.	*Fæcal concretion* impacted at end.	,,	—
12	9	In 1908 had multiple abdominal abscesses which required two operations.	Opened and drained on two occasions. On third, abscess burst per rectum.	Appendix found and removed. Adherent by strong adhesion at tip only.	No destruction of appendix.	,,	Ventral herniæ cured at same time by muscle sliding.
13	—	Pain for 8 days before abscess operation.	Abscess formation. Opened and drained.	Rectus route. Appendix found and removed. Appendix lying far back in pelvis. Adherent.	No destruction of appendix, which was long and rather chronically inflamed.	,,	Discharged 35 days after final operation. Wound healed slowly.
14	24	Pain for 8 days, two previous attacks.	Abscess opened and drained. Large quantity of pus.	Appendix found and removed. Many adhesions.	No destruction of appendix. Chronic inflammation.	,,	Discharged 24 days after final operation.
15	4½	General peritonitis.	Multiple drainage tubes.	Appendix found and removed.	No destruction of appendix.	,,	Abdominal herniæ cured by muscle sliding.
16	27	—	May, 1910. Abscess formation. Opened and drained.	Nov., 1910. Appendix found and removed. Adherent behind cæcum. Acute kink.	No destruction of appendix. Acute kink with *fæcal concretion*.	,,	—
17	30	—	July. Pelvic abscess. Opened and drained.	Nov. 25th. Appendix found and removed. Adherent.	No destruction of appendix.	,,	—

from future attacks. However, future attacks are more probable than in cases where repeated attacks of a milder type have led to cicatrisation or atrophy of the organ?" Page 517: "Mortality after operation for local abscess, 13·4 per cent." Of cases which recovered and had been followed up there were recurrences in 39·9 per cent., and 70 per cent. of these recurrences were accompanied by fresh suppuration. In 18 cases a subsequent interval operation was performed, and in all the appendix was found capable of giving rise to fresh attacks. All the cases recovered.

Let me now say a few words about the cases I have tabulated, and in so doing I will take the headings.

1. *Age.*—You will note that all the cases are of young people. This is accounted for by the fact that this disease is commoner in the young, and that when an abscess has been opened and drained in an elderly person I have not advised a second interval operation, but have told the patient to await a second attack and then have an immediate operation. In young people, however, I have always advocated a subsequent interval operation, as they are more likely to be in inaccessible places when another attack occurs—Canada, Switzerland, &c.

2. *History of attacks.*—Here is one of the strong reasons in my opinion for an interval operation as soon as convenient. Out of 17 cases there were multiple attacks in Nos. 6, 8, 9, 16, and, if I may mention another case, A B (9), who had an abscess opened and drained in 1902; in 1904, peritonitis and two operations, appendix not removed. In 1911 I heard from the mother that he had had another severe attack in France, and asking if the appendix had been removed and whether I advised its being taken away if it had not. In these cases you will see that sometimes several years elapsed between abscess formation and a fresh attack. (Nos. 6 and 8, and A B.)

3. *Nature of primary operation.*—In all cases drainage only, as now advised by the majority of surgeons. Most of the cases did not come into the surgeon's hands till more than a week after onset of symptoms. Under these circumstances the abscess cavity is usually well defined and the appendix almost impossible to find and remove. When one is able to get at the cases before 48 hours there is rarely any difficulty in doing this, and in the great majority of cases now sent into hospital we see them before the third day of disease (often much earlier), and hence the difference in the nature of the operation.

4. *Final operation.*—Not difficult as a rule. Route: Rectus in all cases on account of the possible difficulties from adhesions; but in the majority of cases these were conspicuous by their smallness. They were marked in Nos. 6, 8, and 16, when I think any other incision would have made the removal extremely difficult, but I do not propose discussing these incisions here. One most remarkable thing to me is the absence of many adhesions in such cases as Nos. 3, 9, and 12. Difficult cases are usually those with numerous subacute attacks.

5. *Condition of appendix.*—(*a*) Found and removed in all cases. (*b*) No obliteration of lumen. (*c*) Fæcal concretions in two cases (Nos. 11 and 16 and ? No. 9). (*d*) No destruction of appendix as a whole. (*e*) Gross anatomical and pathological changes, such as kinks, scarring, and strictures.

6. *Results.*—Recovery in all cases. In fact, the present mortality of appendectomy in the "interval" stage is, if anything, below 2 per cent., as already stated.

7. *Ventral herniæ.*—These are in my experience frequent after the drainage of abscess through the abdominal wall—A B, Nos. 6, 9, 10, 12, and 15. So that one is able to remodel the abdominal wall as well as remove a diseased appendix.

Therefore the general conclusions I am able to state are:—1. The appendix was never destroyed but was damaged. 2. There was decided liability to fresh attacks with such diseased organs in the belly. 3. In the present keen struggle for existence it is wiser to remove such a menace to life. 4. The danger of a second operation is not great, and herniæ may at the same time be cured. So far mortality *nil*.

In conclusion, I would like to state that these 17 cases are in no way picked, but are taken over a number of years out of 250 cases, just as they came under my care, and I am deeply disappointed that I am unable to show you the whole series of the appendices, but that is not my fault but misfortune.

Oxford.

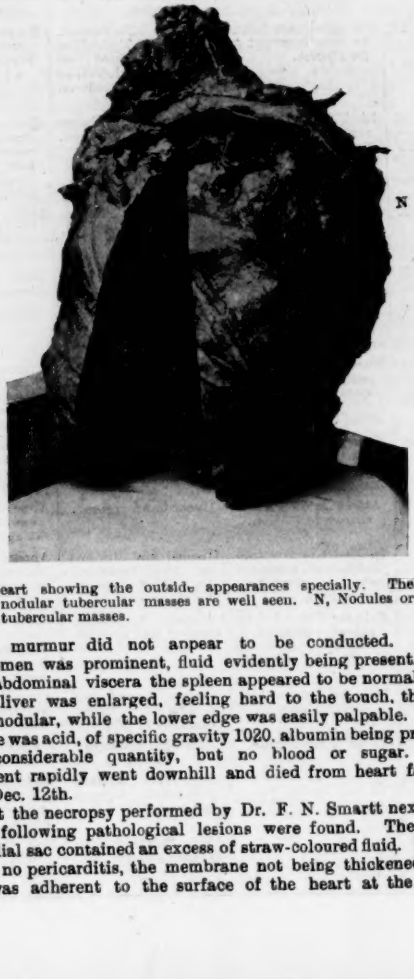
A CASE OF TUBERCULOSIS WITH SPECIAL INVOLVEMENT OF THE HEART.

BY PHILIP BAHR, M.A., M.B., B.C., D.T.M. & H. CAMB.;
AND
GEORGE C. LOW, M.A. ST. AND., M.D. EDIN., C.M.
(From the London School of Tropical Medicine.)

AFFECTIONS of the heart wall are comparatively rare in tuberculosis; therefore we offer no excuse for publishing the following interesting details of such a case.

The patient, a Fijian female, about 25 years of age, was admitted to the Colonial Hospital, Suva, Fiji, under the care of Dr. G. W. A. Lynch, chief medical officer, Fiji, on Nov. 28th, 1910, suffering from hæmoptysis. On admission the following notes were made. Temperature irregular, rising from normal to 99° or 100° F. at night, with a morning fall frequently as low as 96°. The patient was very weak, emaciated, and very anæmic, ascites also being present. An examination of the respiratory system gave well-marked signs of tuberculosis at both apices, similar physical signs being found lower in the lungs as well, while at the bases behind a considerable quantity of fluid was present. As regards the circulatory system, the heart was greatly enlarged, the apex beat lying in the fifth space almost at the anterior axillary line, while the borders in the other directions also lay much beyond their normal limits. On auscultation the cardiac sounds were very indistinct, but a systolic murmur could be detected at the base of the organ.

FIG. 1.



Heart showing the outside appearances specially. The nodular tubercular masses are well seen. N, Nodules or tubercular masses.

This murmur did not anpear to be conducted. The abdomen was prominent, fluid evidently being present. Of the abdominal viscera the spleen appeared to be normal, but the liver was enlarged, feeling hard to the touch, though not nodular, while the lower edge was easily palpable. The urine was acid, of specific gravity 1020, albumin being present in considerable quantity, but no blood or sugar. The patient rapidly went downhill and died from heart failure on Dec. 12th.

At the necropsy performed by Dr. F. N. Smartt next day the following pathological lesions were found. The pericardial sac contained an excess of straw-coloured fluid. There was no pericarditis, the membrane not being thickened, but it was adherent to the surface of the heart at the base.

No tubercles were detected on it. The heart was very large, weighing 37 oz. on removal. It presented a most unusual appearance, the walls both of the auricles and ventricles being studded with nodular masses of the shape and size of small marbles. The organ was not opened at the time of the necropsy, but was preserved and brought to England entire. Both pleural sacs contained a great excess of clear straw-coloured fluid. On the right side many adhesions bound the lung to the chest wall, while numerous miliary tubercles could be seen dotted over the pleural membrane on both sides. On section fairly advanced tubercular lesions, from miliary tubercles up to caseating masses of the size of hazel nuts, were found scattered through both lungs. The apices were both involved. The bases of the organs behind showed considerable œdema.

Of the other viscera, the liver was hard, bile-stained, and typically nutmeg; it weighed 56 oz. The spleen was

FIG. 2.

The cavities of the heart have been more widely opened. The enormously thickened caseating wall of the left ventricle is well seen, and the very small ventricular cavity.

normal. Both kidneys contained a few miliary tubercles, while large caseating areas were found in the mesenteric glands and miliary tubercles were scattered over the peritoneum. Many typical tubercular ulcers were found scattered throughout the small intestine. The brain was not examined.

So far, then, the necropsy notes show that the case was one of tuberculosis of the lungs with a spreading general infection, the unique features being the extraordinary condition of the heart.

Description of the heart.—The heart was brought home from Fiji preserved in formalin and was opened and studied soon after its arrival at the London School of Tropical Medicine. The accompanying illustrations give some idea of the extraordinary lesions found in its walls after section and render a minute written description unnecessary. The left ventricle, perhaps more so than the other chambers of the heart, was greatly diminished in size owing to an enormous, more or less concentric, hypertrophy of the ventricular wall. The myocardium showed an extraordinary appearance, being infiltrated, or rather replaced, by caseous, cheesy masses of different sizes, these having produced the nodular or marble-like lumps seen on the outside of the heart during the necropsy. Fig. 1 shows these well. The wall at the base of the ventricle measured no less than 1¾ in. in thickness, this gradually tapering to ¼ in. at the apex. Practically no normal muscular tissue was left, the tubercular lesions having entirely replaced this. Fig. 2 illustrates these points.

The right ventricle and both auricles were also affected, the cavity of the left auricle especially being surrounded and infiltrated by tubercular masses and thereby greatly obliterated. Remains of pericardium adherent and firmly bound to the auricles and great vessels at the base were easily found, but, as already mentioned, the pericardial membrane was, on the whole, quite free from tubercular changes.

The case furnishes an excellent example of a tubercular myocarditis, and with such advanced caseous masses replacing almost entirely the whole muscular substance of the heart it is extraordinary how life could have been prolonged as long as it was. The caseation and cheese-like masses were quite typical of tubercle, but to make absolutely certain of this sections were cut both of these and the lesions in other parts of the body. Histologically these showed typical tubercular lesions, and by Ziehl Neelsen's method tubercle bacilli were detected in large numbers in the material taken from the heart.

In conclusion, we must state how greatly indebted we are to Dr. Smartt for his kindness in allowing us to publish this case.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

"PANNICULITIS."

BY WILLIAM BAIN, M.D. DURH., M.R.C.P. LOND.

FOR the past dozen years I have met patients who declined to continue massage on account of the pain it produced. This hyperæsthesia I thought then was purely neurotic. During the last few years I have had a number of these cases. On examination it was found that the hyperæsthesia was generally limited in extent and distributed in patches. The patches occur most frequently on the abdomen, next in order of frequency on the legs, arms, and back, and occasionally on the thorax. I will attempt to describe a patch. If you pick up the skin and subcutaneous tissue over it and roll them between the fingers they feel somewhat firmer and less elastic than the normal structures. The slight infiltration is either in the deepest layers of the corium, or in the subcutaneous tissue, or in both. Judging by tactile sensation my impression is that the inflammatory deposit is in the subcutaneous tissue. The sensitive areas are generally smooth, about 1 or 2 inches in diameter, and very tender on pressure. If the pressure is applied perpendicularly to the surface the tenderness is slight, but if applied from the circumference of the sensitive area it is very marked. A patch is evidently an aggregation of smaller ones. When the patch is disappearing under massage it splits up into several smaller ones, and the thickening therefore becomes uneven. The contour of the smaller patches can be made out, and before they finally disappear they feel like small pin-heads. These sensitive deposits occur chiefly in neurotic patients. Most of the patients are females about the middle period of life, and are inclined to be stout. I will briefly mention the last two cases I saw during the autumn.

Mrs. A, aged 46, gouty, had a hæmorrhage on the left side of the brain 12 years ago. The systolic blood pressure was 150, and the weight 12 st. She was somewhat neurotic. She had a single patch in each upper arm; both were very painful when massaged.

Mrs. B, aged 48, had appendicitis four years ago; no operation on account of the feeble condition of her heart. The heart was slightly dilated and the pulse was weak. The systolic blood pressure was 99, and the weight 14 st. 12 lb. The patient was not in the least neurotic. She had four patches on the abdomen which were very painful on pressure.

It is difficult to give an accurate description of the condition, as there is so little to feel. In the case of Mrs. B the exudations would probably have escaped observation were it not for the pain produced on examining the abdomen.

The pain is evidently produced by the pressure of the inflammatory deposits upon the nerve endings.

As I believe the infiltration occurs in the panniculus adiposus I should be inclined to coin a word and call it "panniculitis." The condition is apparently quite distinct from fibro-myositis, although the two are sometimes associated. In one of my cases the masseuse had to disperse the thickening in the panniculus adiposus before attempting to massage the indurated muscle immediately underneath on account of the tenderness caused by the manipulations.

Dr. W. H. Maxwell Telling,[1] in a most interesting paper entitled "Nodular Fibro-myositis," does not differentiate between panniculitis and induration of the muscles. One of the cases he describes (No. 4) was, I think, an example of panniculitis. Further, in my experience panniculitis occurs more frequently in gouty than in rheumatic subjects.

Regarding treatment, massage is the only effective remedy. I have tried thyroid extract, but I am not satisfied as to its therapeutic utility in this affection.

Harrogate.

A CASE OF COMPLETE LOSS OF MEMORY—? AFTER INFLUENZA.

BY H. S. GASKELL, M.B., CH.B. EDIN.,
HONORARY MEDICAL OFFICER TO THE COBHAM COTTAGE HOSPITAL.

THE following case may, I venture to think, be of interest to readers of THE LANCET.

On Jan. 16th I was called to see a young man, aged 22 years. I found him in bed complaining of feeling seedy and having a cough and sore-throat. He lay very still, muffled up in the clothes, and seemed rather depressed. The duration of the illness had been four days. Up to the 15th he had been attending to his duties as usual. He had never had any illness, and the only medical attention he had ever received had been for measles and chicken-pox in childhood. My examination proved negative. The temperature was normal and the pulse was of low tension and regular in force and frequency. The fauces and uvula were very slightly, if at all, reddened. The tongue was very slightly furred at the back. The action of the heart and lungs appeared to be normal. I prescribed calomel and a mixture containing sulphate of magnesia and nux vomica. On the 18th I saw the patient again, when he was up and dressed. He said he felt better, only a "bit slack." On the 22nd (Monday), although not yet feeling quite up to the mark, he started out to walk to his place of employment, a distance of half a mile. He walked about 200 yards, and remembers addressing some remark to a boy on the road, and after that his mind became an absolute blank. The next thing he remembered was sitting, in a state of complete exhaustion, on a seat at Hampton Court, nine miles away. He asked where he was, and then having just enough money in his pocket, he came back by train, went to bed, slept straight off for 13 hours, and woke up feeling much better. He was kept in bed for five days, although he felt well, and a full diet, with extra milk and eggs, was recommended. He has now resumed his duties and appears to be perfectly well.

The "trance" began approximately at 8.45 A.M. and ended at about 3.45 P.M. The patient stated that on awaking he had a violent headache, and felt very tired and cold. He was so cold that he thought he must have been sitting still for some time. The weather at the time was damp and rainy, but not very cold. He had never been near Hampton Court before. He must have walked along a main road (the Portsmouth road), along which flows a constant stream of motor traffic, and must have passed through the congested district of Kingston-on-Thames, with all its trams and crossings. It would be interesting to hear of any other experiences of the sort.

Cobham, Surrey.

[1] THE LANCET, Jan. 21st, 1911, p. 154.

MEDICAL SICKNESS AND ACCIDENT SOCIETY.—The twenty-ninth annual general meeting of the above society will be held at the meeting-place of the Medical Society of London, 11, Chandos-street, Cavendish-square, W., on May 9th, at 4.30 P.M.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

MEDICAL SECTION.

The Vaccine Treatment of Goitre.

A MEETING of this section was held on Jan. 23rd, Dr. FREDERICK TAYLOR, the President, being in the chair.

Captain R. MCCARRISON, I.M.S., read a paper entitled, "The Vaccine Treatment of Simple Goitre," which is published in full on p. 357 of this issue of THE LANCET.

Dr. F. PARKES WEBER asked whether thyroid feeding produced diminution of the goitre in the class of cases which Captain McCarrison had treated. One would expect it to do so if the explanation offered were correct.

Dr. FREDERICK LANGMEAD said that anyone who had followed Captain McCarrison's work on goitre and allied conditions could have counted beforehand on hearing something of importance and interest that afternoon. The question which the reader of the paper had introduced, of the relationship between the thyroid gland and toxæmic conditions, was a very broad and intricate one. Amongst a large number of examples of this relationship he would mention three groups of cases in which it occurred: (1) conditions connected with uterine and ovarian function; (2) rheumatoid arthritis; and (3) tetany. It was generally agreed that the thyroid gland enlarged at puberty, during pregnancy, and during the menstrual periods, which could be regarded as minor and abortive pregnancies, and that signs of thyroid incompetence were not uncommon at the menopause. Evidence was accumulating to show that this enlargement was not merely associated with ovarian activity, but was brought about by the presence of an active agent in the blood. This agent in the case of pregnancy was thought to be actually transferred to the blood of the newly-born child, in whom it caused mammary secretion, vaginal hæmorrhage, or prostatic activity. By Halban it was believed to be a product of the chorionic villi. With regard to rheumatoid arthritis, there was considerable evidence to show that it might be produced by absorption of toxins from the bowel, and the good effect of such drugs as guaiacol was ascribed by some to its antiseptic action on intestinal micro-organisms. Moreover, many cases had been recorded of the association of Graves's disease and rheumatoid arthritis, and thyroid extract was sometimes very efficacious in the treatment of the latter. Tetany had been mentioned by Captain McCarrison. Now tetany, as it occurred in young children, was almost invariably preceded by abnormal loose or offensive motions. In adults it complicated dilatation of the stomach and Bouveret and Dévic had isolated a toxin which could produce tetany from the stomach contents in such cases. The speaker himself had recorded other cases of tetany in children, associated with dilatation of the colon, which appeared to be analogous. That there was a relationship between tetany and the thyroid gland was well known. These remarks only conveyed a few ideas bearing on the connexion between thyroidal enlargement and toxæmia—a very big subject.

Mr. JAMES BERRY said that he thought the profession was rapidly coming to the conclusion that all cases of goitre were due to a toxic influence, and that chemical changes in the water were not the cause. Whatever the toxic agent was, it was suspended in the water used for drinking. The treatment of parenchymatous goitre was essentially medical, but there remained other forms to be dealt with by the surgeon. He hoped that vaccines might be another valuable means of medical treatment. He was convinced that no surgeon should operate upon simple parenchymatous goitres until they had been efficiently treated by medical means for a considerable time. It could not be expected that medical treatment would benefit patients suffering from adenomata. He did not agree that hypertrophic and parenchymatous goitre were synonymous terms. The latter was a condition of atrophy rather than of hypertrophy. The vesicles were filled with secretion, but it was stagnant and the cells were inactive. He asked whether any diarrhœa was produced by treatment.

The PRESIDENT said that, as various medical methods were

beneficial in parenchymatous goitre, it was to be expected that there was some underlying factor which was common to them all. Had Captain McCarrison thought whether there was anything in common in the methods of operation of arsenic, iodides, thyroid extract, and vaccines?

Dr. ROBERT HUTCHISON said that although no one could deny Captain McCarrison's therapeutic results he was not so sure about the validity of his explanation of them. He was always rather sceptical about intestinal intoxication and thought that it was too often advanced as an explanation of all sorts of obscure conditions. All they knew of the secretion of the thyroid tended to show that it was a great stimulant of oxidation in the body, and those conditions in which a physiological hypertrophy of the thyroid occurred, such as pregnancy, were perhaps conditions in which there was an increased metabolism and a demand for more thyroid secretion to meet it. This explanation was quite as likely as that there was an increased toxæmia. On the other hand, there was much more reason to regard the liver as the organ concerned with the destruction of poisons passing from the portal system. He would like to know how long the beneficial effects of vaccine lasted in these cases.

Dr. F. G. CROOKSHANK asked what kinds of goitre were prevalent in Gilgit, and whether they showed any tendency to spontaneous cure? Did endemic cretinism occur?

Captain MCCARRISON, in reply, said that no diarrhœa had occurred in his cases. No recurrence had taken place over a period of two years in some of them. He thought that the common factor in the various forms of treatment lay in the truth that they all assisted the thyroid in its antitoxic function. Goitre in the Gilgit Valley was like goitre elsewhere. Cretinism was very common there and goitre occurred in 40 per cent. of the cretins. He had never seen a goitre of any standing disappear spontaneously. 20 per cent. of recruits imported to that district became goitrous and a few got well without treatment when the enlargement was very slight.

SECTION FOR THE STUDY OF DISEASE IN CHILDREN.

Radical Cure of Inguinal Hernia in Children.—Exhibition of Cases and Specimens.

A MEETING of this section was held on Jan. 26th, Dr. G. A. SUTHERLAND, the President, being in the chair.

Mr. DOUGLAS DREW showed a case illustrating the Late Result of Muscle-transplantation for the Relief of Talipes Valgus. The peroneus brevis had been transplanted to the tibialis posticus by passing it across, beneath the tendo Achillis, and over the other tendons at the inner side of the ankle. The operation had been most successful in remedying the valgus, but a slight degree of varus had supervened. Reference was made to other cases in which a similar result had been obtained.

Dr. THEODORE THOMPSON showed two brothers with Hæmophilia. The first shown was a poorly nourished boy 10 years old. The symptoms had been present from infancy, and bruising had been usual on very slight trauma; if he scratched his hand he would bleed for an hour. Sometimes there was slight bleeding from the mouth. For several years he had had attacks of pain and swelling in the knees. Coagulation time five minutes. The second boy was aged 5 years, stout, and well nourished. Extensive bruising of the skin and deeper structures occurred on very slight injury. The only family history of bleeding was on the mother's side.

Dr. ERIC PRITCHARD and Mr. SYDNEY STEPHENSON exhibited a case of Cerebellar Tumour. Five years ago the patient had received a blow on the head. Three years ago he had vomited for no apparent cause, and since then he had been subject to intermittent attacks of headache, vertigo, and sickness, which were preceded by optic prodromata, which usually took the form of fortification spectra with a brilliant range of colours. There was slight incoördination in walking, and Romberg's sign was present. The pupils responded to light, both directly and indirectly. There was hippus, especially in the left eye. When the eyes looked straight at an object, as, for example, the ophthalmoscopic mirror, they jerked slightly up and down. There were also jerking movements on looking inwards, outwards, and upwards, and double papillœdema without inflammatory signs or retinitis.

Dr. R. C. JEWESBURY showed a case of Deformity of the Chest in a girl aged 12 years. The mother first noticed "something wrong" with the shoulder 10 months ago. The child had had a severe fall down 15 stairs when 3½ years old, and was considerably hurt at the time. The upper part of the right side of the chest was much flattened, the first and second ribs were sunken, and bony thickening was felt on these ribs below the clavicle. The pectoral muscles on the right side looked wasted, but there was no loss of power. The radiogram showed a bony outgrowth from the first rib projecting downwards and articulating with a similar growth from the second rib. Cervical ribs, well developed on the right side, were present.

Dr. JEWESBURY also showed three cases of Hemiplegia. The first patient was a boy, aged 4 years, a full-time child. Labour had been prolonged, but no instruments had been used. The child had been weak down the right side from birth, and subject to fits, chiefly affecting the right side, causing twitching, with loss of consciousness. There was marked atrophy of the right side of the face, with weakness of the right face, and right arm and leg, the hand and foot cold, and shortening of the right leg. The patient in the second case was a girl, aged 7 years, with weakness down the left side which had been noticed when she was 7 months old. Fits of epileptic type affecting the right side were first noticed five months ago. The left arm and leg were much wasted, and there was marked loss of power with shortening of both arm and leg. In the third case, that of a boy aged 4 years, loss of use in the right hand and arm had been noticed for about one month. Squint was first noticed six months ago. There was marked loss of power in the right hand and arm; the arm was usually held straight downwards and kept stiff. The patient walked with the feet wide apart and kept the right leg stiff. There was weakness in the right leg. Elbow-jerk and knee-jerk were increased if obtained when muscular spasm was relaxed. The boy was backward and his speech was difficult to understand.

Dr. F. PARKES WEBER showed a case of Congenital Pulmonary Stenosis without Cyanosis in a boy 6 years of age. The heart was somewhat in excess of the normal size, and over the præcordium was heard a harsh systolic murmur, with its maximum intensity over the pulmonary area, to the left of the sternum.

Dr. EDMUND CAUTLEY exhibited a case of Lymphatism in a boy aged 6½ years. The boy was tall for his age. There was an area of dulness over the manubrium sterni extending more to the left than the right, with some general enlargement of the lymphatic glands and spleen; and adenoids and hyperplasia of the circumvallate papillæ. The heart-beat was slow, the pupils were large, the complexion was pale, and the skin was thin, with an excess of subcutaneous fat.

Mr. J. P. LOCKHART MUMMERY showed a case of Shortening of the Left Femur in a boy aged 7½ years. The presentation had been a breech, and at two weeks of age "something wrong" was noticed with the left leg. For two years the boy had worn a high boot, and there did not appear to be any increase in the shortening in that time. The left leg was 1½ inches shorter than the right, and this was practically entirely in the femur. The angle of the femur was slightly reduced on the left side. It was considered that the shortening might be due to an injury to the upper femoral epiphysis at birth.

Dr. CAUTLEY exhibited a specimen of Tuberculous Tumour of the Dura Mater in a child aged 14 months.

Mr. PHILIP TURNER read a paper on the Radical Cure of Inguinal Hernia in Children. The object of the paper was to bring forward a modification of the usual operation for this condition, and by the method the least possible damage was inflicted upon the inguinal canal, and the sac was efficiently removed. The operation which Mr. Turner performed is as follows:—The external oblique aponeurosis is exposed by a short incision above Poupart's ligament, external to the external abdominal ring. A short ½ inch incision is made through the aponeurosis just above the middle of Poupart's ligament; the internal oblique is retracted, and the cord, covered by the cremaster, exposed just below the internal abdominal ring. By blunt dissection the cord and sac are drawn through the small incision in the external oblique; the sac is readily isolated and ligatured at the internal ring and removed, the small incision in the external oblique aponeurosis being closed with a few catgut sutures.

BALNEOLOGICAL AND CLIMATOLOGICAL SECTION.

Bubonic Plague.

A MEETING of this section was held on Jan. 25th at 15, Cavendish-square, W., Dr. G. H. THOMPSON (Buxton), the President, being in the chair. About 20 members and visitors were present.

Dr. F. M. SANDWITH read a paper entitled "Bubonic Plague" (illustrated by the epidiascope).

Dr. P. ABRAHAM remarked that the important rôle which the lower animals played in the spread of disease was one of the most notable advances in knowledge in recent times, and he believed that the number of diseases so spread would be recognised to be greater in the near future. He instanced leprosy, the bacillus of which would probably be found to be identical with the acid-fast bacillus discovered by Mr. Dean some few years ago in rats. Dr. Bayon was now writing upon this subject, and his observations so far tended to prove the truth of this view.

Dr. S. D. CLIPPINGDALE expressed his grateful appreciation of Dr. Sandwith's instructive and interesting paper. Referring to the matter mentioned by the President, the outbreak of plague at Eyam in 1665, he had visited the place, and was interested to learn that the vicar had not only placed a cordon round the affected area, but outside this cordon had placed a tank of water into which money was placed to pay the people who brought food for the cloistered plague-stricken inhabitants, thus showing on the part of the reverend gentleman a commendable knowledge of the requirements of sanitation.

Mr. W. J. MIDELTON (Bournemouth) said he thought he had heard Dr. Sandwith say that pus organisms killed off plague bacilli in the buboes. If so, did not this raise the question that pus organisms might be beneficial in certain circumstances?

Dr. LIEVEN (Aix-la-Chapelle) mentioned how important was the study of zoology for employment in practical bacteriology, as, for instance, the bacillus typhi murium (mouse typhoid) discovered by Löffler, which attacked only certain mice, and it was luckily that species most commonly found to which it has a predilection.

Dr. E. SOLLY (Harrogate) and the PRESIDENT also took part in the discussion.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF PATHOLOGY.

Exhibition of Specimens.

A MEETING of this section was held on Jan. 12th, Dr. T. G. MOORHEAD being in the chair.

Dr. W. D. O'KELLY exhibited specimens from a case of General Tuberculosis with some unusual features. The patient, a female child, aged 11 years, died with every sign before death, confirmed post mortem, of generalised tuberculosis, but Dr. O'Kelly was unable to demonstrate tubercle bacilli in the affected tissues. Numbers of sections were stained by the Ziehl-Neelsen method, especially those from the lungs, spleen, and liver, with a negative result. Even the anti-formin method was unsuccessful. The dairy from which the girl perhaps became infected may be traced, and tubercle bacilli demonstrated in the milk supplied by it.

Dr. W. G. HARVEY gave a short clinical history, with an account of the morbid anatomy of a case of Addison's Disease, and showed specimens and sections. The patient was admitted to the Adelaide Hospital under Dr. H. T. Bewley on May 22nd, 1911, complaining of weakness and vomiting. She had never enjoyed very robust health. In 1897 her foot had been amputated for tuberculous trouble. Subsequently she began to suffer from pain along her spine, which continued with intermissions until February, 1911, when she became noticeably weak. The weakness increased for a couple of months, when the following symptoms supervened: Insomnia, loss of appetite, with palpitation and breathlessness on the slightest exertion. Constant pain in the stomach, uninfluenced by food. Frequent attacks of vomiting, usually in the morning, and often followed by fainting. General languor, mental and bodily, and failure of memory. On admission to hospital she appeared excessively weak. She was moderately well nourished, nor was there apparent anæmia. She lay sunken down in the bed, and answered questions drowsily without turning her face or eyes towards her interrogator. The skin of the face and hands, and more especially that of the axillæ and nipples, were darkly pigmented. Reflexes normal, slight nystagmus. Temperature irregular, generally subnormal, but rising to about 100° F. Pulse weak, tension low, rather rapid (100 per minute). A trace of albumin sometimes present. There was general tenderness over the abdomen. She gradually sank and died on June 16th, 1911. At the post-mortem examination very little abnormality could be made out by the naked eye, save completely caseous suprarenals, the darkly pigmented skin, and a markedly flabby heart. The microscopic examination showed the suprarenals to be entirely caseous, none of their normal structure being discernible. The skin showed dense masses of pigment, mostly situated in the deep layer of rete Malpighii. The heart muscle showed an extreme degree of "fragmentation." In addition to this a miliary tuberculosis was present in the lungs and liver, and tubercles were also present in the ovary. It would seem that this miliary tuberculosis, which had every appearance of being recent, must have come on shortly before the patient's death. The suprarenals, on the other hand, must have been tuberculous for some considerable time, and the history of the case would suggest their infection before the foot was amputated in 1897.

Dr. W. BOXWELL showed a specimen of Carcinoma of the Cardiac End of the Stomach.

Dr. K. E. L. G. GUNN showed two specimens from cases of Disease of the Bladder. He described the first as a typical warty carcinoma of the bladder occurring in a patient from whom a villous growth had been removed some years before, and at the time reported "innocent." Both ureters were widely dilated and thickened, and both kidneys pyonephrotic. The patient from whom the second specimen was taken had been thought to be suffering from enlarged prostate. He was moribund on admission, and the post-mortem examination proved death to be due to general septic peritonitis. In the bladder were found three calculi, one in each of two lateral pockets, giving the organ the shape, and to the touch the sensation, of a large prostate gland. The third calculus had caused a perforating ulcer of the fundus and consequent peritonitis. It was the first case of the kind Mr. Gunn had seen.

SECTION OF STATE MEDICINE.

Sterilisation of the Mentally Unfit.—Causation of Insanity in Ireland.

A MEETING of this section was held on Jan. 19th, Dr. T. P. C. KIRKPATRICK being in the chair.

Mr. M. J. NOLAN read a paper on the Proposed Sterilisation of the Mentally Unfit, in which he advanced the calculation that this line of treatment, when confined to reproductive cases of reproductive ages, only amounted to some 7 per cent. of the asylum population on any given date. He invited the attention of his hearers to the probable bad effects of these operations on the mental condition of these recoverable cases, and also the probable evil effect on the healthy husband or wife of such recovered cases. He dwelt on the fact that the lines of mental inheritance follow no very definite lines, and that the sterilisation of the unfit of one generation was no guarantee for the degree of fitness in the next. He pointed out that this aspect of the question became more involved when the observations made recently at the Epileptic Village Colony at Skelman, U.S.A., were taken into account. There it was noted that the mating of persons nervously unstable with those mentally deficient produced 50 per cent. of normal offspring, so that such paradoxical results would tend to reinforce the sound stocks, and that as the natural law was the survival of the fittest, nature always kept the degenerates in the minority. In conclusion, he held that sterilisation was a premature proposal, and that much could be done by legislation touching education, syphilis, drink, marriage of defective, and pathological research in mental disease, to accomplish the reduction in the number of the insane, so much to be desired by all.

Mr. R. R. LEEPER read a note on the Causation of Insanity in Ireland. He stated that in the course of his experience he found that in cases of insanity who did not recover, and in whom recovery was not complete, a hereditary taint was nearly always present. In Ireland the most potent cause in

the production of insanity was the unreformed Poor-law system. None of the recommendations by the Royal Commission upon the Feeble-minded could be carried out without Poor-law reform. The workhouses of Ireland continued to receive a number of defective and feeble-minded women, who gave birth there to numbers of illegitimate children who were defective, and thus a steady stream of degenerates was yearly poured into the general population. The married habitual pauper's children were reared in workhouse atmospheres, and developed into criminals or degenerates of one kind or another. Medical men did not preach eugenical ideas, and people entered into marriages without due consideration of the matter from a eugenical standpoint. People considered eugenics a very admirable science, but it had no bearing whatsoever upon their own individual lives.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A special meeting of this society was held on Jan. 19th, Mr. H. Littlewood, the President, being in the chair.—Dr. E. F. Bashford, director of the Imperial Cancer Research, gave an address on "Some Aspects of the Cancer Problem."—There was a clinical demonstration of cases of malignant disease which had remained free from recurrence for seven years or longer after operation.—Dr. A. Hawkyard showed a patient in whom the right half of the tongue, with glands, had been removed by Mr. Lawford Knaggs over nine years ago.—Dr. H. H. Greenwood showed a case of Duct Cancer of the Breast successfully operated upon in 1897, and a second case of scirrhous cancer operated on in 1899. In both cases Halstead's operation was performed.—Dr. A. Christy Wilson showed: (1) A patient who was operated upon by Mr. Pridgin Teale in 1881 for carcinoma of the breast; and (2) a man from whom he had removed a sarcoma of the upper jaw in 1898, the growth being of the size of a Tangerine orange and small-celled. The whole of the left upper jaw, including the orbital plate, left tonsil, pillars of the fauces, &c., was removed.—The President gave a demonstration of patients whom he had operated on for malignant disease at the Leeds Infirmary during the period from 1896 to 1905. The number was 190. These were written to by Mr. E. T. Willans, Mr. Littlewood's house surgeon. Only 69 replies were received. Of these 23 patients are now alive and well. Six patients lived more than seven years and died without any recurrence, 23 died within two years from recurrence, and 17 died from recurrence at longer intervals. So that out of 190 cases, 29 are known to have lived for seven years after the operation without any recurrence—i.e., about 15 per cent. The cases shown were: Sarcoma of clavicle, 1; sarcoma of testis, 2; sarcoma of upper jaw, 3; sarcoma of breast, 1; carcinoma of breast, 5; carcinoma of colon, 5; and carcinoma in other parts, 6.

HARVEIAN SOCIETY OF LONDON.—A meeting of this society was held at Paddington Green Children's Hospital on Feb. 1st, Dr. H. J. Macevoy, the President, being in the chair.—The following cases were shown:—Dr. Leonard G. Guthrie: (1) Transposition of Viscera and Dextrocardia; (2) Right Cerebellar Tumour; and (3) Chronic Jaundice with Splenomegaly.—Dr. G. A. Sutherland: (1) Achondroplasia; (2) Congenital Heart Disease; (3) Acute Polioencephalitis; (4) Cardiac Disease with Rheumatic Nodules; and (5) Tuberculous Peritonitis.—Dr. R. Miller: (1) Infantilism with Renal Disease; and (2) Acute Poliomyelitis.—Mr. A. Edmunds: Congenital Absence of Femur.—Mr. M. S. Mayou: (1) Sympathetic Paralysis of Right Eye; and (2) Congenital Word Blindness.—The cases were discussed by various members.—Some interesting microscopical slides were also shown in the new pathological department by Dr. H. W. Perkins.

A CORRECTION.—Professor W. D. Halliburton writes to say that Dr. J. Burdon-Cooper's statement at the Ophthalmological Society meeting, reported in our last issue on p. 297, is not quite correct. Professor Halliburton did not confirm the presence of tyrosin in the aqueous. The crystals examined by Professor Halliburton in 1906 looked something like tyrosin, but the amount present was insufficient for analysis. The subsequent account of the investigation of the lens of a pig's eye was given, of course, by Dr. Burdon-Cooper, and referred to his own work.

Reviews and Notices of Books.

Pathologische Anatomie. Ein Lehrbuch für Studierende und Aerzte. Bearbeitet von L. ASCHOFF, Freiburg i. Br.; M. ASKANAZY, Genf; H. BEITZKE, Lausanne; C. BENDA, Berlin; M. BORST, München; A. DIETRICH, Charlottenburg; P. ERNST, Heidelberg; E. v. GIERKE, Karlsruhe; L. JORES, Köln; R. KRETZ, Würzburg; O. LUBARSCH, Düsseldorf; O. NAEGELI-NAEFF, Zürich; R. RÖSSLE, Jena; M. B. SCHMIDT, Marburg; H. SCHRIDDE, Freiburg i. Br.; E. SCHWALBE, Rostock i. M.; M. SIMMONDS, Hamburg; C. STERNBERG, Brunn. Herausgegeben von L. ASCHOFF, Freiburg i. Br. Zweite Auflage. Jena: Gustav Fischer. 1911. Erster Band: Allgemeine Aetiologie, Allgemeine Pathologische Anatomie. Pp. 778. Price, paper, M.14; bound, M.15.75. Zweiter Band: Spezielle Pathologische Anatomie. Pp. 997. Price, paper, M.16; bound, M.17.75.

To the editor it appeared impossible for one person to write a text-book on general *and* special pathology without devoting his whole time to it, and hence he summoned to his aid trusty and well-equipped collaborators.

Volume I. deals with general pathology, and it begins with an article by R. Rössle on General Ætiology and the Causes of Internal Diseases. M. Askanazy then deals with the Causes of External Diseases, and Rössle contributes a chapter on the General Pathology of the Cell. The rest of the volume is devoted to general pathological anatomy, and is divided into chapters in which are treated successively the following subjects: Malformations, by E. Schwalbe; Disturbances of Metabolism, by E. v. Gierke; Diseases of the Circulatory System, by A. Dietrich; Immunity and Allied Phenomena, by R. Kretz; Inflammation, by O. Lubarsch; and Pathological Growths and True Tumours, by M. Borst.

It is impossible to do more than single out a few of the salient features in a work which is so admirable throughout. The part devoted to heredity is particularly well done and well illustrated, and we commend its perusal to pathologists. The causes of external diseases, such as the effects of heat, cold, electricity, light, X rays, atmospheric pressure, traumatisms, infections, chemical toxins, poisons, and auto-intoxications, are all skilfully and compactly handled. Parasites—first the vegetable forms—as the cause of disease are next considered. The coloured illustrations are particularly fine, both as regards sharpness of definition and truthful reproduction of the staining—good examples are those of pneumococci, gonococci, sarcina; of the bacillus of anthrax, tetanus, influenza, typhoid, tubercle, and leprosy; of treponema pallidum of Schaudinn in syphilis blackened by silver nitrate by the Levaditi colouration. Animal parasites belonging to the protozoa, vermes, and arthropoda are next considered, and are equally lavishly and successfully illustrated. There are also life-like illustrations of trypanosomes and the malarial parasites. The general pathology of the cell is well illustrated in colour, including Negri's corpuscles in nerve cells, giant cells, and degenerations in general.

A section of their studies not much pursued by students is that of general teratology, which in this volume is treated in a most attractive manner by E. Schwalbe. It includes comparative teratology as well as human abnormalities. The figures are excellent—e.g., those of cephalothoracopagus of various kinds, of holoacardius as seen by the X rays, and such strange forms as diprosopus, craniopagus, abnormalities which find their explanation in the facts of embryology. The chapter on disturbances of metabolism is illustrated by 31 figures. Such outstanding subjects as death (general and local), necrosis, atrophy, degenerations are concisely set forth. The derangements of fatty and of

mineral metabolism are equally well discussed and illustrated —e.g., siderosis, argyrosis, anthrakosis, and rickets. There are excellent figures to illustrate the text on the circulatory organs. One is very striking—viz., that of an embolism of the pulmonary artery resulting from thrombosis of the femoral vein.

Under the head of "Protective Inoculation and Immunity" there is a full account of serum therapeutics, agglutinins, precipitins, anaphylaxis, cytotoxins, and allied subjects, and particularly well set forth and illustrated is the theory of immunity. The chapter on Inflammation and the illustrations are good, and the same may be said of the chapters devoted to Pathological Growths and True Tumours.

Volume II. concerns itself with special pathological anatomy. The editor, Professor Aschoff, deals with the heart, female reproductive organs, the digestive and urinary organs. C. Benda is responsible for the blood-vessels and the lymph-vessels. O. Naegeli treats of the blood and Schridde of the blood-preparing organs. H. Beitzke gives an account of the respiratory organs, and P. Ernst of the nervous system. The male reproductive organs are allotted to M. Simmonds; the liver and pancreas to C. Sternberg; glands with internal secretions to E. v. Gierke; the skin to L. Jores; and the motor apparatus M. B. Schmidt.

In dealing with the special organs, in every case there is a preliminary chapter on the development, and the anatomy of the normal organ under consideration is briefly and tersely described. As in Volume I., the illustrations are excellent. In the chapters on the heart we may refer to the *a.-v.* bundle, brown and fatty degeneration of the heart fibres, and those of stenosis of the aorta and myocarditis. The figure of fatty degeneration of the aorta is particularly life-like. The description of the blood-preparing organs is good, and the illustrations are equally so. There are a number of figures in the chapter dealing with bones which we think are not usually found in text-books. They should commend themselves particularly to the surgeons. Some of the illustrations of the nervous system appear to be rather small and crowded with detail, while there are relatively fewer coloured illustrations than in the other sections. The pathology of the urinary organ is very well set forth, and the same may be said of the treatment of the digestive tract—a rather lengthy series of chapters.

We have said enough to show how excellent, comprehensive, and well illustrated this text-book is. We feel sure that it will be welcomed by all pathologists, both in the land of its birth as well as in foreign parts. Text, type, paper, and illustrations are all alike beyond cavil, and we congratulate the editor and his co-workers on the successful result of their combined efforts.

The Life of John Ruskin. By E. T. COOK. In two volumes. London: George Allen and Co., Limited. 1911. Vol. I., pp. xxv. and 540; Vol. II., pp. 615. Price 21*s.* net.

To few men has it been given to have their thoughts and writings so criticised as have been those of John Ruskin. Almost every man of letters in this country for fifty years has had his say about the master, and we wonder that there is anything fresh to tell. Mr. Cook, we remember to have heard, used to tear the wrappers from the early numbers of "Fors" on his way from chapel to breakfast when a boy at school, and ever since those early days he has been in constant contact with Ruskin's mind and works. But to those elders who have almost forgotten the enthusiasms universally displayed with regard to Ruskin's earlier work, these volumes will come with pleasing freshness, and more modern students will find both cause and effect of Ruskin's work displayed intelligibly.

Much of the fascination and influence of Ruskin lay outside of his didactic criticisms and his more formal oratorical essays. He would have rested immortal upon the formulations of "Modern Painters" and "The Seven Lamps of Architecture" alone, but he was much more than an art critic, and perhaps the subject in which he attained the greatest accuracy of thought was geology. His latest biographer is free to touch upon personal matters with less reserve than Mr. Collingwood was able to do in 1893, and we are afforded pathetic glimpses of the failures and misfortunes of Ruskin's life. Details interesting to the psychologist of his repeated mental attacks are given with discretion and taste, and reference is made to the explanation given by Ruskin himself to a writer who communicated this account to the columns of the *British Medical Journal* of Jan. 27th, 1900. One notable feature in the attacks of mental storms was the vivid character of the visions and the exacerbation of the beauties and hideousness of things beautiful and hideous respectively. The writer of the article asked Ruskin if he did not think that this might be due to his (Ruskin's) highly developed artistic sense, to which Ruskin replied in the negative, but he also referred to the extremely vivid manner in which children could see what grown-up persons could not—e.g., resemblances in natural objects to something else which had no connexion with them. And herein may lie the explanation of Ruskin's vivid vision in illness. He had the mind of a child, with all its powers of imagination and ability to make real that which an adult would call unreal. His mental quality was always of that kind described by Thomas Treherne in writing of his childhood:—

> Then did I dwell within a world of light
> Distinct and separate from all men's sight,
> Where I did feel strange thoughts and such things see
> That were, or seemed, only revealed to me.

And this internal vision was sharpened in illness. But how human Ruskin could be when the bow unbent; what a charmingly naïve picture he gives of himself in Venice (Vol. II., p. 301): "I strike work at two or a little after—go home, read letters, and dine at three; lie on sofa and read any vicious book I can find to amuse me—to prevent St. Ursula having it all her own way. Am greatly amused with the life of Casanova at present." There is nothing of the prig here.

Ruskin's great charm lay in the vast range and versatility of his knowledge. No one, for instance, has written on the Psalms for ordinary lay British readers with the illuminating insight, that page after page of "Modern Painters" demonstrate. And "what a mirror of the author's mind is 'Fors' in its discursiveness! It ranges from Monmouth to Macedon, from China to Peru, from Giotto to goose-pie" (Vol. II., p. 319).

Without undue insistence and without apparent effort Mr. Cook has given us a loving and lifelike portrait of a most learned man, who owed most of his mental training to his own steadfastness, and to whom, although his views were at times Quixotic, his country owes a debt for his burning words in defence of truth, beauty, and that righteousness which exalteth a nation.

The British Pharmaceutical Codex, 1911: an Imperial Dispensatory for the Use of Medical Practitioners and Pharmacists. By direction of the Council of the Pharmaceutical Society of Great Britain. London: The Pharmaceutical Press. 1911. Pp. xiii.–1568. Price 10*s.* 6*d.* net.

THE progress that has been made in pharmacy during the past four years is well reflected in the new issue of the "British Pharmaceutical Codex," but the difference between the new issue and that of 1907 is by no means wholly due to the improved pharmaceutical methods that have been devised during the period intervening between the publication of the two issues. There is abundant evidence that information furnished as a result of pharmaceutical research

has been utilised fully in the new book, and the faults of the first issue—faults which it is almost impossible to avoid in the first edition of a technical book of this magnitude—have been corrected.

The arrangement of the new issue has the advantage of convenience. The 1907 issue traversed the long journey from Abri Semina to Zizyphus without a break, but in the new work the matter is divided into two parts, one containing the materia medica and the other consisting of the formulary. To the former 1100 pages are devoted and to the latter 334, the book containing 150 pages more than the previous issue. In the materia medica section the useful plan has been adopted of indicating by means of heavy type the important properties of the drugs described, and the same type has been used in other ways to facilitate reference. A further improvement is the addition of brief descriptive notes on the preparations of each drug and chemical, at the end of the respective monographs. Where drugs, chemicals, and galenical preparations described in the Codex are official in the British Pharmacopœia or the Pharmacopœia of the United States of America the fact is indicated, an indication which was lacking in the first issue. Reference is also made to the source of non-official preparations mentioned, and of some which were formerly official. By adding to the book a pharmacological and therapeutic index, the Codex Committee have rendered the work the most useful of the kind published in this country; to medical practitioners it will be most valuable.

Collected Papers by the Staff of St. Mary's Hospital (Mayo Clinic), Rochester, Minnesota. London and Philadelphia: W. B. Saunders Company. 1911. Pp. 633. Price 24*s.* net.

WE had the pleasure of noticing in THE LANCET of August 19th, 1911, the first volume of reprinted papers by the members of the staff of the Mayo Clinic, and we are pleased to see that it has been thought well to issue in one volume all the papers which have been published during the year 1910 or thereabout. It is a good plan that might well be followed by other institutions, for a volume such as this gives a very good idea of the activity of the staff, and the reader is able to estimate the amount of work that has been done, and to compare it with the output of other similar bodies. It is not until all these papers have been collected that it is recognised how much has been done. In this volume the contents have been classified according to the organ concerned, and, as might have been expected, a large portion of the book, about half in fact, deals with the surgery of the abdomen. Our space will only permit a notice of the more striking papers.

Dr. H. S. Plummer contributes a paper on the Technic of the Examination of Œsophageal Lesions; it is illustrated by a large number of skiagrams showing the appearances presented by the different classes of lesions; the position, the shape, the size, and the relations of diverticula and dilatations when filled with bismuth mixture are shown clearly in skiagrams. Dr. Plummer speaks highly of Mixter's method of employing a silk thread as a guide: the patient swallows six yards of silk thread; this passes far enough down into the intestine to prevent its withdrawal when it is pulled taut, and if a hollow sound is slipped over its upper end it will be guided into the true channel of the œsophagus and will avoid pouches. Dr. Charles H. Mayo has also written a paper on the Diagnosis and Surgical Treatment of Œsophageal Diverticula, in which he discusses the technique of the recognition of these pouches, and he reports eight cases of this condition, six of which have been treated successfully at the Mayo Clinic; the two others have not had any operation performed on them. Dr. William J. Mayo has supplied a paper on the very important subject of Gastro-jejunal Ulcers, or, as they have been called, "pseudo-jejunal ulcers"—that is to say, ulcers forming at the gastro-jejunal opening. Three cases occurred, but not one case of true jejunal ulcer was met with after 1141 gastro-jejunostomies. Dr. Donald C. Balfour has reported 15 cases of Meckel's Diverticulum; these were found in 10,000 cases of abdominal section. In 5 of the 15 cases the diverticulum caused symptoms for which the patient sought relief, while in the 10 others the patients' symptoms were not due to the diverticulum, yet in a few of these active pathological changes were present in it.

Dr. William F. Braasch has written two papers on the Renal Pelvis in which he has discussed its deformities and the means of recognising them. A number of useful skiagrams accompany the articles. Dr. Louis B. Wilson has described 32 cases of Hypernephroma, and he has also contributed a paper, in the preparation of which he was assisted by Mr. Byrd C. Willis, on the histology of these tumours. He comes to the conclusion that hypernephromata do not arise from adrenal rests or from proliferations of the adult secreting epithelium of the convoluted tubes, as has been suggested, but are derived from "islands of nephrogenic tissues (primitive renal blastema)." The only other paper which we have space to mention is one on Pulmonary and Circulatory Complications following Surgical Operations, by Dr. E. H. Beckman. Four cases of pulmonary embolism are reported, and of these one recovered.

From the fact that many of these papers were written for reading before general medical audiences, it is not surprising that some of them are a little sketchy, but for the most part they are important contributions to surgery. There is certainly some overlapping when the same subject has been dealt with by two different writers, and even illustrations have been duplicated, but this is not of any great importance. We shall look forward with interest to future volumes of this series.

Ancient Types of Man. By ARTHUR KEITH, M.D., LL.D. Aberd., Conservator of Museum and Hunterian Professor, Royal College of Surgeons of England, &c. With frontispiece and 29 illustrations in the text. London and New York: Harper and Brothers. 1911. Pp. xix.–151. Price, cloth, 2*s.* 6*d.*; leather, 3*s.* 6*d.* net.

BY the publication of this little volume in "Harper's Library of Living Thought" Professor Keith has done a double service—a service to the science of anthropology and a service to the great collection of anthropological material which he has under his charge. Anthropology has benefited especially by the method which the author has chosen for presenting his subject, for he has given what is practically a catalogue of the remains of ancient man, so that material which is scattered through many museums and private collections is brought under the review of anyone who cares to spend 2*s.* 6*d.* on the volume. Yet the book is far from being a mere catalogue, for concerning each relic Professor Keith gives the circumstances of the discovery, the characters of the bones, and an able discussion of the probable type of individual represented by a few stray fragments of his skeleton. And withal the whole account is woven into one consecutive story, so that the reader may follow the succession of the early types of the human race from the late Neolithic Briton who ate blackberries in Essex back to that notorious individual who lived in Java in early Pleistocene days at latest.

The whole account is remarkably easy reading, and is given in plain language, which adds enormously to the utility of the book. This very simplicity is the key to the second service rendered by Professor Keith. In England

we have great storehouses of material wherein are kept—and all too often buried—treasures the value of which depends almost entirely upon a chain of apparently trivial details concerning their finding. These details are not infrequently within the knowledge of people ready and willing to furnish them, but unaware of their significance to the specialists who guard the treasures. The scientific gain that attends the awakening of interest in such subjects is not to be easily over-estimated, and Professor Keith has already amply demonstrated this fact in regard to the Gibraltar skull. Often some purely utilitarian work is done—a dock is dug out, a railway cutting cleared, or a gravel pit excavated; in some more fortunate places a scientist may be commissioned to watch the work. In England the observation of the chance finder of some human fragment often affords the only trustworthy data on which hinge questions of the utmost importance.

The man who places, in a form easy of mastery, the essential facts of our knowledge of the traces of early man within reach of the public has, therefore, done good service to his science, and in this case also to his office.

The Declining Birth-rate. By A. NEWSHOLME, M.D. Lond., M.R.C.S. London: Cassell and Co. 1911. Pp. 64. Price 6*d.* net.

OF the series of "New Tracts for the Times," promoted by the National Council of Public Morals, the present is the third in order of publication. Within the compass of its 64 pages the author has accumulated a surprising amount of information, apparently up to date, the like of which in a single volume it would be difficult to find elsewhere. Inasmuch as it is issued by Dr. A. Newsholme, author of "Elementary Vital Statistics," and principal medical officer to the Local Government Board, the accuracy of the statements may be taken for granted. In most civilised countries decline of the birth-rate is undoubtedly taking place, the relation of which to "natural increase of population" is discussed in the text. In the author's judgment this decline can hardly be attributed to postponement or avoidance of marriage. When women of equal age in a given country are compared with women of the same country 20 years later, a great decline of fertility is observed in many parts of the world. But volitional limitation of families appears to be the predominant cause of decline in the birth-rate, both here and abroad. The limitation of families is known to be operative in many countries; and this, rather than an increase of sterility, of which there is no evidence, may be regarded as the governing factor in the diminishing birth-rate. From all the facts available the conclusion seems inevitable that this calamity is chiefly due to causes within human control. The same conclusion is suggested by the fact that in countries like Ireland, where "preventive measures" are forbidden on religious grounds, the corrected birth-rate continues high.

To the general reader the chief value of this pamphlet will be for reference. In the brief notice for which alone we have space it is impossible even to touch upon many of the topics handled in the text, for a fuller discussion whereof the pamphlet itself must be consulted.

LIBRARY TABLE.

Fathers of Men. A Book for Boys. By E. W. HORNUNG. London: Smith, Elder, and Co. Price 6*s.*—A book for boys, about a school, makes its appeal for the most part to an uncritical audience, who may be ready enough to detect small slips in detail, but who will forgive such errors in return for something gallant in heroes, dexterous in athletes, or heinous in villains. Those of us who are no longer boys are inclined, if we take up such books, to be less easy in our judgment; we do not detect errors in slang or the improbabilities of feats on cricket ground or running path, but we are quick to compare our own recollections, possibly fading, with the printed record of young Jack Harkaway; and when we do so we generally find Jack Harkaway's experiences to be not our own, though we may not be prepared to assert that such things do not happen nowadays and in inferior places to the paramount school which had the privilege of educating ourselves.

This is, perhaps, only a long-winded way of saying that a book for boys, about a school, as a rule, is a poor book, succeeding mainly through the amiability of its readers. A poor book on these lines should be an easy one to write, and we think that this is the case, for it is written by the score. But a good and serious book upon school-life, by which we mean to imply one that is written with accurate knowledge, with the intention to create the due atmosphere, and with a sense of the part played in modern English history by the English public school, is a rare work; to write it is an exploit which so far has been accomplished only two or three times. The author has to be old as well as young, just and also enthusiastic, quite sensible but with a proper sympathy for silliness, a censor of manners and morals, and yet a hero-worshipper. Mr. Hornung has the necessary and rare qualifications thus set out, and he has written a book of this serious order about Uppingham School. It is his challenging title, "Fathers of Men," which induces us to notice it in the columns of a medical journal. That the boy is the father to the man is a thesis of medical interest wherever the perpetual question of the value of public schools is in debate, for if there is one thing we are asked more persistently to believe than another it is that the public school environment annuls individual character and turns out young persons all in one mould, knowing exactly with what conventional codes to conform and in what collars and neckties to appear by morning, noon, or night, but otherwise ill-prepared for the life that lies ahead of them. It is suggested by one of the most sympathetic creations in Mr. Hornung's book that this view is nonsensical. Mr. Hornung writes impersonally, but the teaching of his story as a whole leads us to think that he, like his excellent Heriot, believes essential character to be largely independent of surroundings. Such a belief, which we are ready to share, forms a fine testimonial to the much censored public school system, and many a medical man, asked by anxious parents to advise as to the training of their children, will be glad to find the arguments for a reassuring belief in the public school system between the covers of a thoroughly good book.

Mr. Hornung has written a minute account of Uppingham School during the "eighties" under its celebrated head, Edward Thring. Of Thring he gives a remarkable sketch, always sympathetic though now and again critical, while behind all his allusions to that forceful man we see an enthusiasm for his high ideals and aspirations. Certainly under Thring's *régime* boys did not tend to become all of one pattern, for while his ideas of discipline were strict his respect for individuality, even of the individuality of the fourth-form boy, was very real. The message of Mr. Hornung's book is that great good comes of such a reasonable attitude towards boys, whose "young barbarity" will be found to be much on the surface by anyone taking the trouble to scratch below it. A combination of perfectly simple writing with sound psychological thinking makes "Fathers of Men" a remarkable book, and one which the many grandfathers of men will enjoy. It goes without saying that the author of "Peccavi" has planned his story well, and that the creator of Raffles narrates its more salient episodes with spirit and humour.

Leitfaden der Röntgen-Verfahrens. By F. DESSAUER and Dr. B. WIESNER. Fourth edition. Leipzic: Otto Nemnich. 1911. Pp. 366. Price 12 marks.—This is a practical text-book of Roentgen technique written by the well-known physicist and engineer of the Veifa works, in collaboration with a number of specialists, among whom the best known in this country are Holzknecht, of Vienna, and Hoffa, of Berlin. It will be familiar to English students, for a translation of the first edition was published by Messrs. Funk and Wagnalls in 1904. The present edition is much enlarged. The early part, comprising more than half the book, is devoted to the physics and the technique of the Roentgen rays. These are both treated of in a satisfactory manner. The technical directions are particularly good—those, for instance, for the care of the focus tubes, which impress the necessity of keeping them clean and free from moisture, of keeping a selection of tubes of different degrees of hardness, and of softening them once for all and thoroughly when it is absolutely necessary. No better estimate of the comparative merits of the different machines—the Coil, the Grissonator, the Snook, and the Blitz apparatus—can be found anywhere than in the chapter on Roentgen technique by Dessauer himself. Indeed, one of the great merits of the book is the fair and liberal way in which apparatus by different makers is discussed. The chapter on surgical diagnosis is written by Professor Hoffa, and that on the Roentgen therapy by Holzknecht. The sixth chapter dealing with orthodiagraphy and ortho-photography (ortho-skiagraphy would be a better term) is from the pen of Professor Hoffmann, of Düsseldorf. Holzknecht is responsible for the section on Roentgen Diagnosis in Internal Medicine. He insists on the advantages of his hanging screen, supported from the ceiling by balance weights. It is to be regretted that this is not more often used in England, since it is the only method by which Roentgen palpation—i.e., palpation of the abdominal organs under the Roentgen light—can be satisfactorily carried out. This palpation may be effected with complete safety to the operator by the use of Holzknecht's "Distinctor," or, what is equally convenient, a long wooden spoon. In the Roentgen examination of the stomach and intestines half the benefit is lost if the abdomen is not palpated in this way, by the hand, a wooden instrument, or the pressure of the screen. One of the most instructive chapters is also by Holzknecht, and gives the tracings of the screen examination in medical cases. These contain 22 diagrams of the Roentgen diagnosis in diseases of the chest and abdomen, all of which are of the greatest interest. The book is what it professes to be—a guide to Roentgen technique, containing what a student really ought to know, and not too overburdened with detail. It would be of advantage if this fourth edition could find an English translator, or perhaps better still an imitator, who could write with the zeal and knowledge displayed in this work.

The Life of Dr. Arthur Jackson of Manchuria. By the Rev. ALFRED J. COSTAIN, M.A. London, New York, and Toronto: Hodder and Stoughton. 1911. Pp. 187. Price 2*s.* net.—This is a simply and sympathetically written record of the life and death of a medical man who laid down his life at the early age of 26 years in pursuance of his duty of ministering to the sick. The records of our profession contain, we say it with pride, many similar instances of devotion, but Jackson's death occurred in dramatic circumstances which are wanting in those instances of medical men who are fatally infected in the course of everyday practice. He died from plague far away from his home at the Chinese railway station at Mukden and he was ministering not to his own kith and kin, but to Chinese coolies. His duty, for which he had volunteered, was to examine Chinese coolies who were coming down to Mukden from Northern Manchuria, and to stop those who were plague-infected, as most of them were. The Manchurian outbreak of plague during the winter of 1910–11, though comparatively small in extent, was very virulent, and all the more so in that the cases were almost all of the pneumonic type.[1] Jackson had only been in Mukden for ten weeks. He had come out as a medical missionary of the Scottish Presbyterian Mission, and his nominal sphere of work was the mission hospital. But when plague, following the line of the railway, crept down to Mukden it was evident that something must be done to stay its spread to Peking. Hence the intercepting post at the Chinese railway station and Jackson's appointment as medical officer of the intercepting organisation. In spite of every precaution, for he was too sensible to throw his life away by carelessness, Jackson became infected. He had arrived at Mukden on Nov. 14th, 1910; on Jan. 25th, 1911, he was dead. In our obituary notice[2] are recorded some details of the valuable work done by him, even in that short period, as well as a notable and pathetic tribute which was paid to him at his funeral by the Viceroy of Manchuria. Mr. Costain's book—while giving this and other interesting information—will also serve as a memorial of a noble life, untimely cut off, and one of which his professional brethren, his school (Merchant Taylors, Crosby), his university (Cambridge), and his final medical school (Liverpool), may well be proud.

The Anopheline Mosquito. Some Facts and Information for Use in Schools. By R. C. DAUGLISH. With an Introduction by J. W. W. STEPHENS, M.D. Cantab., Liverpool School of Tropical Medicine. London: John Murray. 1911. Pp. 28. Illustrated. Price 6*d.* net.—This little book, which is dedicated to "the Children of the Empire," is instructive and interesting. Mrs. Dauglish wrote her story of the anopheline mosquito for a society formed in Barberton, in the Transvaal, to fight malarial fevers, the society being known as the Barberton Anti-malarial Association. The facts set forth are simple and clearly expressed, and the lay reader will find carefully explained to him how to keep himself free from "fever" or "ague." The story of Ismailia is an example of what modern research can attain to. The book should be of particular use in the schools in those countries where anopheline mosquitoes and malaria are found, and to adults visiting such places.

Tuberculosis: A Plain Statement of Facts regarding the Disease. Prepared especially for Farmers by the International Commission on the Control of Bovine Tuberculosis. Published by the Government Printing Bureau, Ottawa, Canada. 1911.—This excellent brochure of 30 pages combines in a short space a number of most telling facts clearly illustrating the untrustworthiness of an opinion upon the presence or absence of tuberculosis in cattle based on external appearances only. The author, Dr. J. G. Rutherford, C.M.G., F.R.C.V.S., the Veterinary Director-General for Canada, thus endeavours again to bring before farmers and others interested in cattle the dangers of tuberculosis, and the value of the application of the tuberculin test for stamping the disease out of a herd. He deals with the subject in simple language, and increases popular interest by a series of excellently reproduced photographs. The brochure can be obtained by medical men upon application to the Government Printing Office, Ottawa.

Essentials of Surface Anatomy. By CHARLES R. WHITTAKER, F.R.C.S. Edin., F.R.S.E., Senior Demonstrator of Anatomy, Surgeons' Hall, Edinburgh. Second edition, revised and enlarged. London: J. and A. Churchill. 1912. Pp. 59 and 12 plates, comprising 20 figures. Price 3*s.* 6*d.* net.—

[1] THE LANCET, April 29th, 1911, p. 1152.
[2] THE LANCET, March 11th, 1911, p. 707.

Mr. Whittaker is to be congratulated upon the appearance of the second edition of this little work, for the publication of a new issue has given him the opportunity for making several improvements, the most obvious of which is the inclusion of some outline drawings. These are for the most part not very ambitious pieces of work, but they have the merit of simplicity, and all answer their purpose well. The book gives in simple form the most important surface markings and landmarks of the human body, and as an epitome of these it may well fill the same sphere of utility that its former edition has so successfully occupied. Perhaps it would be well to consider if, with an increase of this sphere of utility, it would not be advisable to include, at any rate within brackets, the nomenclature laid down by the Basle agreement. For anything save a local reputation it seems likely that such a step would be essential.

A Naturalist on Desert Islands. By PERCY R. LOWE, B.A., M.B. Cantab. London: Witherby and Co. 1911. Pp. 300. Price 7*s.* 6*d.*—For the grown man who remembers his "Robinson Crusoe" and his "Coral Island," the subject of desert islands is one of perennial interest, and Dr. Lowe's description of islands which, if not exactly desert, are still in a very primitive condition, will take many readers back to the days of their youth. The islands in question are the two Swan islands, Blanquilla and the Hermanos. The first two are specks of coral situated in lat. 17° 25′ N., and long. 83° 56′ W., or, roughly speaking, 98 miles north of Cape Patook in Honduras. Blanquilla belongs to Venezuela and is close to the Hermanos, which belong to the same power. Their position is roughly lat. 12° N. and long. 64° 30′ W. Dr. Lowe visited them recently in company with Sir Frederick Johnstone and Lady Wilton his wife, and this book gives an account of the geological and zoological features of the islands, which are of quite disproportionate interest as compared with the size and commercial or political importance of these atoms of land. Swan Island (there are two, but they are only 400 yards apart, and the second one is only about one mile long by half a mile wide, so that we may speak of them as one) is practically a "buoy" marking the southern edge of Bartlett's Deep, a depression in the sea bottom of some 18,000 to 20,000 feet in depth. The only inhabitants are a "Mr. A.," his father, mother, brother, and a few negro servants. The island is apparently quite oceanic—i.e., it has never had any dry land communication with the mainland, and therefore its flora and fauna offer many problems as to how they arrived at their present habitation, and Dr. Lowe's speculations on these problems are by no means the least interesting portion of his book. Blanquilla and the Hermanos come in a different category and form part of the long chain of islets running along the north coast of Venezuela. Blanquilla is inhabited by one family, one member of which lives apart by himself; the Hermanos islands are given up to birds, whose tameness was in no way shocking to Dr. Lowe as that of the birds of a similar island was to Alexander Selkirk, but, on the contrary, of extreme interest. He expresses a hope that among the solitudes of these islands there may still be found examples of the apparently extinct race of petrels, oestrelata, which used to inhabit Jamaica. Anyone who cares for strange forms of animal life cannot do better than consult Dr. Lowe's charmingly written book.

MISCELLANEOUS VOLUMES.

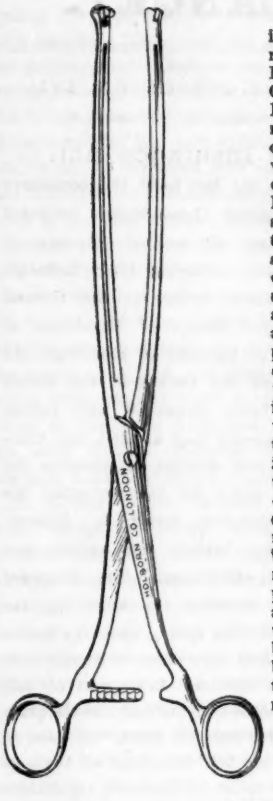
THE National Insurance Act is giving everybody much to think about, judging from the great output of books explaining it. *The Alphabet of the National Insurance Act, 1911*, by Mr. C. G. Moran, Barrister-at-Law (London: Methuen and Co. Limited. Price 1*s.* net), arranges the contents of the Act in dictionary form, so that the reader can at once put his finger on any particular point concerning which he may desire information. The idea is certainly a good one. The book is merely an alphabetical analysis of what the Act really provides, not in any sense an argument concerning its merits or defects.——In these days medicine touches on so many departments of life that there is probably no information, however technical, which the medical man may not at some time or other find useful, and the way in which our clothes are washed is certainly no exception to this statement. *The Washhouse and All About It*, edited by C. F. TOWNSEND, F.C.S. (London: The Power Laundry. 1911. Price 1*s.* net), deals with an important department in the cleansing of soiled clothing. It contains a general description of the washing process, and includes information as to the best way of removing stains, with comments on the use of chemicals, starch, bleaching processes, and so forth.——*The Modern Culture of Sweet Peas* (London: The Cable Printing and Publishing Company. Price 1*s.*) is a very practical little book by Mr. Thomas Stevenson, an authority on the subject. The book is already known to many, and its re-issue at a third of the original price will give to it the wider circulation which it deserves.——"Peeps at Industries" is the excellent idea of a series of books to be issued to give information about the great industries of the world, and the first of the series is on sugar. (*Sugar.* By EDITH A. BROWNE. London: Adam and Charles Black. 1911. Price 1*s.* 6*d.* net.) The author adopts a free conversational style and tells her interesting story quite well. We have read the accounts of cane and beet cultivation, and the manufacture and finishing of the sugar for the markets, with great pleasure. The industry, moreover, has many historic features.——The question whether beet cultivation, with the view of making sugar therefrom, can be made to pay in England is very fully discussed in *Sugar Beet, Some Facts and Some Illusions*, by Home Counties (J. W. ROBERTSON-SCOTT). (London: Horace Cox. 1911. Price 6*s.*). The book is a valuable contribution to the subject. After careful inquiry in a great many directions the writer concludes that (1) "there is good reason to urge that those who have suitable land in the vicinity of a proposed factory should make the experiment of beet growing for three or five years; and that they should be supported by landlords and by local opinion"; (2) "if the best price for roots with a reasonable sugar percentage is given, a price it should be apparently within the power of properly planned and properly managed factories to pay, and the new crop is grown with the intelligence, business acumen, and attention to detail which distinguish our agriculturists—proper regard being had to Continental experience—beet growing should prove as remunerative as it is found to be in Holland by farmers who are not factory shareholders."——There are now quite a number of books dealing with the practical side of milk production. A good guide to the testing of milk by chemical methods has recently been published under the title of *Milk Testing: A Simple Practical Handbook for Milk Producers and Distributors.* (London: The *Dairy World* Office, price 1*s.*) The author, Mr. C. W. WALKER TISDALE, F.C.S., shows an intimate acquaintance with his subject, and the tests he describes should be clear to the dairy farmer and his assistants. The list of tests is, moreover, a very comprehensive one.——In *Milk and Cream Testing*, by G. SUTHERLAND THOMSON, F.R.S. Edin. (London: Crosby Lockwood and Son, 1911, price 4*s.* 6*d.* net), we find a book designed for reference in the school, farm, and factory. The directions and tests given are obviously the outcome of a wide practical experience, while the arts of making butter and cheese are ably discussed with due regard to the special modern scientific developments bearing upon this important industry.——The University

Press of Aberdeen has recently published a subject catalogue containing the titles of the books in the Phillips Library of Pharmacology and Therapeutics, Marischal College, which was founded in memory of the late Dr. C. D. F. Phillips by his widow. Dr. Phillips contributed several works on Materia Medica and Therapeutics, and his library shows what a vast source of reference on this and cognate subjects he kept by him.——Dr. J. Ewing Mears is to be commended for his effort to spread broadcast a knowledge of what is probably the greatest object lesson the world has had of the power of intelligent and scientific sanitation to abolish deadly diseases that have for centuries held certain tropical countries in their grasp. Of countries so oppressed, perhaps the Isthmus of Panama was the very worst; yet so important was it to world progress that thousands of lives have been lost there in futile attempts to utilise it for the purposes of commerce. In the *Triumph of American Medicine in the Construction of the Panama Canal* (Philadelphia: W. J. Dornan. 1911. Pp. 26) Dr. Mears traces the transformation of the "canal zone"—a belt of territory containing 322 square miles, extending 5 miles wide on each side of the Panama Canal, extending from the Atlantic to the Pacific—from a pestilence-ridden area, reducing the death-rate of all white folk who went there from 70 per cent. to under 1 per cent. He details the measures and precautions taken in the achievement of this result, which certainly fulfil the definition of genius as "an infinite capacity for taking pains." It is not so much superior knowledge as superior powers of organisation that has rendered possible this remarkable achievement of Colonel W. C. Gorgas, of the Medical Corps of the United States Army.—— In a *Manual of Heraldry* (London: T. Werner Laurie. Pp. 291. Price 6*s.* net) Mr. Gale Pedrick traces the rise, progress, and decay of this ancient science, without some knowledge of which, he truly says, it is absolutely impossible for anyone to understand and appreciate the associations and even the beauty of much poetry, art, architecture, or literature. The beauties of symbolism are being too much lost sight of in this realistic age. In this book the precursors of heraldry are described, the authorities of British arms explored, the various charges and armorial instances are historically and symbolically discussed, the influence of heraldry upon art and architecture, archæology and genealogy, as well as upon literature and poetry (particularly that of Scott), is expounded, and finally the author proposes a reform of heraldry—whose spirit from an archæological and artistic standpoint is always fresh, though its ancient exercise is dead and incapable of resuscitation—by measures designed to accommodate it honourably to modern conditions. The illustrations of coronets, ordinaries, tinctures, differences, and so forth, are facsimiles of those contained in a "Pocket Herald" and "Gentleman's Companion," published by Richard Barry, of Bristol, "as the Act directs," on August 1st, 1810. ——The fourth (revised) edition of Hassam's *Arabic Self Taught (Syrian)* (London: E. Marlborough and Co. 1911. Pp. 128. Price, paper, 2*s.*; cloth, 2*s.* 6*d.*) has been practically rewritten by the Rev. N. Odeh, and much entirely new matter, including an outline of the grammar, has been added. The transliteration used has been carefully devised to give the phonetic pronunciation of Arabic in accordance with the scheme adopted by the Congress of Orientalists, and has been simplified to the last degree.

Messrs. John Ouseley, Limited, of 6, Fleet-lane, Farringdon-street, E.C., ask us to state that *The Blood and its Third Anatomical Element*, by A. BÉCHAMP, translated by Dr. MONTAGUE R. LEVERSON, which was reviewed in THE LANCET of Jan. 27th, p. 235, is published by them in this country at 6*s.* net.

New Inventions.

A NEW STOMACH CLAMP.



THE accompanying figure illustrates a stomach clamp recently made for me by the Holborn Surgical Instrument Company, Holborn-circus, London, E.C. The blades may be had either straight or curved. It has been a well-recognised difficulty to obtain a clamp possessing length and rigidity with strength sufficient to effectually retain a grasp on the stomach without unduly crushing it. This instrument has the desired spring, and with the end locking arrangement there is no possibility for the blades to side-slip. The fenestræ permit, if desired, the insertion of sutures to prevent hæmorrhage, while at the same time they assist in retaining the grip upon the stomach wall after division. If the slot be not desired, rubber tubes may be placed over the blades, but this is not recommended as the forceps possess the necessary rigidity and safe grasping power when used naked. If covered by rubber the blades must be locked much too tightly to retain a hold without risk to the tissues grasped.

ALEX. MACLENNAN,
M.B., C.M. Glasg.
Glasgow.

A NEW EVACUATOR FOR LITHOLAPAXY.

IN THE LANCET of Jan. 20th Mr. John Pardoe draws attention under this title to the fact that many of the older forms of evacuators for litholapaxy are made with their metal collars permanently attached to them, and he describes an evacuator of the Bigelow type in which the glass bulb is removeable from the bottle.

Milton's improved evacuating apparatus.

Messrs. Down Bros., Limited, point out that Mr. Milton's evacuators have been made with both the mounts removeable for many years past, and were first described in their catalogue in the year 1900, and the illustration appended has appeared in their catalogue since the year 1906. That being the case, it has naturally drawn attention to the matter, and they have been frequently called upon to supply, and have made, Bigelow's and most other models of evacuators with removeable screw collars made on the same principle as those shown in the accompanying illustration.

THE LANCET.

LONDON: SATURDAY, FEBRUARY 10, 1912.

The National Insurance Act.

As we foreshadowed in our last issue the conference which the National Insurance Commissioners proposed to hold with representatives of medical interests on Feb. 2nd came to nothing. Finding their invitation declined by such important bodies as the General Medical Council, the Royal College of Physicians of London, the Royal College of Surgeons of Edinburgh, the Society of Apothecaries, and the Council of the British Medical Association, and being threatened with refusal from other bodies whose answers they awaited, the Commissioners decided at the last moment to postpone the conference. The reasons given for not accepting the invitation of the Commissioners varied in different quarters, but the feeling behind the replies was clearly much the same everywhere. The strongest and the most general objection to attending the conference was that it had been sprung upon the bodies concerned without giving them time either to consult their constituencies or to confer together. In support of this suddenness we presume that the Commissioners would quote Section 58 of the Act, which instructs them, "As soon as may be after the passing of the Act" to appoint an Advisory Committee for the purpose of making and altering regulations under the Act. If the object of the conference had been confined to obtaining the help of the medical profession in forming this Advisory Committee (which must contain "duly qualified medical practitioners who have personal experience of general practice"), and if the invitations had been given with proper notice and due discrimination, the various bodies might have replied with less unanimity. For the formation of the Advisory Committee is the necessary prelude to the issue of the Regulations. But even if the Commissioners had displayed both tact and knowledge of the medical profession, it is very likely that the attempt to secure a conference with representative medical bodies would have failed, so strong is the feeling that no regulations whatever can shape the medical provisions in the existing Act into an acceptable form.

We know that this view is not held universally, and we publish this week the first of a short series of articles by Dr. W. A. BREND upon the position of the medical profession under the Act, which are designed to persuade the profession that a scrutiny of the parts of the Act affecting the medical profession will show the practitioners to be in a stronger position than is usually supposed. We choose this time for publishing Dr. BREND'S articles because there has been during this past week a remarkable unanimity in certain political papers in misrepresenting the point of view of those medical men who are opposed to the Act, while we are sure that our readers are as willing to hear both sides of any question as we are desirous of presenting those sides. The method employed by politicians has been to suggest that our opposition to the measure is purely the outcome of Tory bias or greedy terror, and it is endeavoured to prove this suggestion by demonstrating that as within the covers of the Act everything that is wanted by any fair-minded medical man can be obtained, no medical man can oppose the Act and be fair-minded. We invite our readers to study Dr. BREND'S articles and form their own conclusions. It is on the principle of *audi alteram partem* that we print this "Examination of the Medical Provisions of the National Insurance Act." It will be obvious to all who have followed the previous leading articles in THE LANCET that Dr. BREND is not in agreement with ourselves as to the main issues, but it is always well to clarify our ideas by a critical study of the strongest case that can be made out for the other side by one who can speak as an expert; and Dr. BREND has clearly studied the Act very closely as a barrister, while as a medical man he can appreciate the force of medical arguments. Our lay critics have not these advantages.

The result of the breakdown of the conference with the Commissioners is surely to show that, at any rate, delay must be granted before the working of the Act commences; the most favourable view of the medical provisions in the Act that can be taken by any partisan seems to us to point the same way. During the week an exposition of the National Insurance Act has appeared which will surely be studied with the greatest possible attention by many of our readers, and they will note in the preface, contributed by Mr. LLOYD GEORGE, that the Chancellor anticipates difficulties in the working of the Act, although he does not go so far as to admit, as Sir JOHN SIMON, the Solicitor-General, has already done, the certainty that amendments will be required. The description in this volume [1] of the position in which the medical profession will be placed by the working of the Act has been very carefully done, but the thing that stands most clearly out therefrom is summed up in the words of the authors: "It is impossible to forecast what the ultimate effect of the Act will be on the medical practitioners ....." That incomplete sentence of an excellent work, carefully written and admirably edited, forms a powerful argument for insistence upon delay in the working of the Act. The medical profession was not consulted before the original Bill appeared. During its transformation into the very different Act that it is, the representations of the medical profession were rewarded by little tangible improvement. The medical profession has come to a fairly unanimous opinion that under the existing medical provisions they will not obtain fair treatment—a statement which is fully borne out by the pledges given by many thousands of medical men, and which will receive endorsement at the forthcoming

[1] National Insurance. By A. S. Comyns Carr, W. H. Stuart Garnett, and J. H. Taylor, M.A., M.B. With a Preface by the Right Hon. D. Lloyd George, M.P. Macmillan and Co. Price 6s. net.

meeting of Representatives of the British Medical Association. There is no reason why they should be forced into working a measure concerning which they have never been duly consulted; and there is no justice or sense in representing their opposition to the measure as political. What is required now is an assurance that delay in the working of the Act will be granted; failing this the outcome may be very sad.

The Panama Canal and the Spread of Exotic Disease.

THE axiom that "disease follows trade" stands on a firm basis, past experience having shown that many maladies, particularly those classed as exotic, travel commonly along commercial highways by land and sea. In the olden days of trade caravans and sailing ships the spread of these infections was comparatively slow, but with the introduction of railways and steamships the diffusion of disease has become more rapid. The linking of the Atlantic and the Pacific Oceans by the ship canal now being cut through the Isthmus of Panama has therefore become of the highest importance to the whole world. We have described in our columns the sanitary procedure at the immense works,[1] and it is this which enables the Government of the United States to anticipate that the canal will be opened in about two years' time. The canal will create an entirely new situation, both in commerce and international sanitation, for it will place in communication ports which have hitherto had no direct trade with each other. For instance, the numerous ports situated on the western shores of South America will then have direct communication with the so-called Gulf ports in the south-east of the United States, and steamships from Eastern America will be able to sail across the Pacific to Japan, China, and India. Fears have already been expressed by epidemiologists that these altered geographical conditions may facilitate the spread of infection of such diseases as plague and yellow fever. One aspect of this subject has been dealt with recently in the *New Orleans Medical and Surgical Journal* by Dr. HOWARD D. KING, who in a vigorous article sounds the alarm, and warns New Orleans of the risk it will run on the opening of the Panama Canal from plague imported from the ports situated on the western shores of South America in the republics of Colombia, Ecuador, Peru, and Chili. In these States plague has been prevalent for some years and is in places increasing in amount, accompanied by a concurrent epizootic of plague among rats. At present there is no direct communication by ships between these ports and those like New Orleans, situated on the Gulf of Mexico; but when the canal is opened they will be within a few days' sail of each other.

None of the four States above mentioned possesses a sanitary administration worthy of the name, nor is there any trustworthy certification or record kept of the causes of death. Moreover, with plague, as with other infectious diseases, a policy of concealment is commonly adopted, and the bulk of this population is entirely apathetic in the matter of domestic and public sanitation. The measures hitherto employed to check the spread of plague have been inadequate, and such as they are they have been inefficiently carried out. In the circumstances there seems little prospect that these infected States will lend much assistance in preventing the exportation of human and rat plague, which must inevitably follow when the canal is opened for traffic and shipping communications are greatly increased. There are many fine harbours on the west coast of South America, and as soon as the new trade route is ready the vast resources of the interior of this part of the country as yet unexploited will be rapidly developed, with consequent great augmentation in the number of steamships calling at the ports. But the ports in the west of South America are not alone in their neglect of proper precautions against plague, for it appears from Dr. KING'S statements that New Orleans, and presumably other Gulf ports, are equally unready to deal with the disease. In New Orleans, with a population of over 370,000, are a number of recently arrived Italians of the poorer class, and also many negroes, whose mode of living often violates every modern sanitary requirement. Close to the river front, and within a stone's throw of the ships berthed alongside the old wooden wharves, are to be found warehouses, freight depôts, grain elevators, cold storage plants, factories of various kinds, along with stables and other buildings, all of which are overrun with vast hordes of rats. In the vicinity are situated working-class dwellings, some of them of a wretched description and notoriously lacking in most sanitary requisites. Men and animals, Dr. KING says, are housed in close proximity, and courts and backyards are littered with rubbish and household refuse. Bred for many years amidst a population opposed to sanitation rather than indifferent to the inconvenience of its institution, the rat lives and multiplies in most intimate association with the people; and families of rats occupy the same room with the human tenants. Foodstuffs are stored in the living apartments, thus affording a plentiful and easily accessible supply for the increasing rodent population. We can hardly conceive a combination of circumstances more favourable to the spread of plague. If infected rats, brought by steamships from infected ports, should land and mingle with the local rodents it would be almost an impossibility to prevent a serious epidemic of plague arising in New Orleans, and with probable extension of the outbreak to the valley of the Mississippi and even to the very heart of the United States. It is earnestly to be hoped that the municipality of New Orleans will take Dr. KING'S warning seriously to heart, and that in the short intervening period before the opening of the canal the necessary steps will be taken to remedy the existing insanitary conditions and especially to carry out a war of extermination against rats.

This is not the first warning that New Orleans has received of the plague danger, for two years ago, Surgeon J. H. WHITE, of the United States Public Health and Marine Hospital Service, drew attention to the grave insanitary conditions in the city and to the probable arrival of the infection from not far distant affected ports. As long ago as 1903 Sir PATRICK MANSON approached the subject from another aspect, that of the possible conveyance of yellow

[1] THE LANCET, vol. i., 1905, pp. 1530, 1597, 1726.

fever virus, in the form of infective stegomyiæ, on board ship through the canal from the well-known endemic area of the disease on the east of South and Central America, into the Pacific, and thence to the ports of India, China, or Japan. His views, which were fully set out in a paper[2] which he read before the Epidemiological Society in London, caused at the time some uneasiness and received the support of other eminent epidemiologists. Although a committee was appointed to draw up recommendations to meet the anticipated danger, and to make representations to our own and the United States Governments, we fear that ultimately the matter was allowed to drop. At the present time an International Sanitary Conference is sitting in Paris to discuss proposals for the purpose of amending the existing convention agreed upon by the Powers in 1903 with the object of preventing the spread of cholera, plague, and yellow fever. Official delegates from the United States and from nearly all the republics of South America, as well as from some Asiatic countries, have attended at Paris with the representatives of the Powers of Europe to discuss the best means for protecting all parts of the globe against the infections of these three exotic diseases. In the circumstances we think it is extremely probable that the attention of the delegates will be directed to the changed conditions which will be brought about by the completion of the Panama Canal and to the increased facilities which will be afforded for the conveyance of certain diseases along this new trade route. The matter will, no doubt, receive the most careful consideration, and the result will in all probability be included in the new International Sanitary Convention which will be submitted to the Powers for signature.

We may here refer to the sending of Major S. P. JAMES, I.M.S., on a deputation to study yellow fever in the endemic area in order to advise the Indian Government in regard to preventive measures. It is worthy of mention that under the direction of the medical experts appointed by the Isthmian Canal Commission a very great deal has been done to remove from that area the unwholesome conditions which for many years made the canal zone notorious for its unhealthiness.[3] At the present moment malaria and other tropical diseases, including yellow fever, have been controlled to a very large extent, and the region around the canal may now be said to be comparatively healthy for Europeans. Local efforts such as these have far-reaching effects, and while we admit the great benefits which the provisions of an International Sanitary Convention will confer upon those who become parties to it, we are of opinion that much can be done locally by individual efforts. Prophylaxis, like charity, should begin at home, and owners and occupiers, in addition to the local and central health authorities, have their parts to perform in trying to secure wholesome conditions of living for all by scrupulous cleanliness of persons and houses, protection of food- and water-supplies, the provision of proper drainage, excrement disposal and scavenging, and particularly the waging of war continually against dangerous insects and vermin of all kinds, with removal of every condition likely to favour their multiplication. Such measures, if properly carried out, not only assist in preventing the spread of exotic disease, but add much to the general health and comfort of the people; and perhaps they may, in their place, be regarded as being, on the whole, of more general utility than the rigid enforcement of restrictive quarantine, or the needless disinfection of articles of merchandise.

[2] The Relation of the Panama Canal to the Introduction of Yellow Fever into Asia, read on Feb. 25th, 1903, before the Epidemiological Society in London. See THE LANCET, March 7th, 1903, p. 658.

[3] THE LANCET, June 3rd, 1908, p. 1646.

Prehistoric Bones.

AT the present time our knowledge of prehistoric man is expanding rapidly. During the last few months several works have appeared in England which aim at giving the general reader a knowledge of this subject. Taking them in the order in which they have appeared, these are "Ancient Types of Man," by Professor A. KEITH, which we review in another column; "Ancient Hunters," by Professor SOLLAS; and "Prehistoric Man," by Dr. W. L. H. DUCKWORTH. We are glad to see that English anthropologists are awakening to the resources of their country, for of late years our eyes have been centred on France, believing that the history of fossil man could only be deciphered in that country or in the neighbouring parts of Central Europe. As matters now stand the appearances are in favour of England again taking her place in the van—a place which she held throughout the opening half of last century. The foundation of our knowledge of prehistoric man was laid by JOHN FRERE, who in 1797 discovered at Hoxne, on the border-line between Norfolk and Suffolk, well-worked flint implements of a primitive type under a deep layer of brick earth. Brick earth is regarded at the present time as a deposit left by the floods which followed *one* of the glacial periods. In such deposits are found remains of the mammoth, of the woolly rhinoceros, and many extinct and living forms of animals. We have now come to recognise that these flints found and described so long ago by JOHN FRERE belong to what may be called the Acheulean civilisation, because at St. Acheul, in the valley of the Somme, North-West France, these implements occur so abundantly. Now the French experts have shown that such implements were used by the ancient inhabitants of Europe who preceded Neanderthal man, whose flints belong to a later and really lower civilisation, known as the Mousterian. We naturally infer from these facts that there must have been a race of men living in England long before Neanderthal man, with his massive face, beetle-brows, and acromegalic characters, appeared in France.

It is in this connexion that the human skeleton discovered recently by Mr. J. REID MOIR near Ipswich becomes of importance and interest. Over the skeleton thus found there was only a layer of boulder clay four feet in thickness. Fortunately there were experts at hand to see the remains exhumed and to examine minutely the surrounding and overlying strata, and they are confident that the boulder clay was unbroken and undisturbed, a condition which precludes the possibility of a burial at this spot—at least since the boulder clay was laid down, after the great period of glaciation. We must therefore assume that the skeletal remains thus found are older

than the boulder clay, and we turn at once to see how this pre-boulder-clay man stands in relationship to the people who fashioned JOHN FRERE'S implements at Hoxne. Thanks to the labours of the British Association we have a very exact knowledge of this relationship. The Hoxne implements are much more recent than the boulder clay. Between the brick earth, under which these flint implements occur, and the boulder clay, there is found a series of strata, one of them containing remains of Arctic plants and a deeper one with temperate plants. If the boulder clay represents one period of glaciation and the Arctic plants another and much later cold period, then we see that between the time of the pre-boulder-clay man and that of the men of Hoxne there elapsed at least two glacial and one interglacial or temperate period. In the boulder clay and in the underlying glacial sands Mr. MOIR has found well-worked flints which may be regarded as the handiwork of the Ipswich race. He found worked flints at a much deeper or older horizon—namely, beneath the red-crag formation which marks the passage from the Tertiary to the Quarternary period—a point in time prior to the Glacial period. We have every reason, then, to anticipate the discovery of a pre-boulder-clay man, or, to use a common but an inexact term, pre-Glacial man. The skeletal remains thus discovered were examined by Professor KEITH. He found that all the characteristic features of the Neanderthal race were absent; the skeleton belonged to a tall man of the modern type. The brain capacity was comparatively low—namely, 1430 cubic centimetres (Neanderthal man had a capacity of 1600 cubic centimetres or more); the skull was rather flattened from above downwards, as is the case in Neanderthal man. The peculiar features of the skeleton lie in the bones of the leg. There is no crest or shin to the tibia; it is of a form not yet seen in ancient or modern races.

Until the Ipswich discovery was made—we are presuming that those concerned will be able to prove the geological age—the earliest human remains found in England were those from the 90-foot terrace of the Thames Valley, near Galley Hill, Kent.[1] The terrace is a remnant of the bed of the Thames; since it was laid down the river has excavated the wide valley below the level of that terrace. In the case of the Galley Hill skeleton there could be no question of burial; it lay beneath 8 feet of stratified sand and gravel. If the remains had been of the Neanderthal type they would have been at once accepted as genuine, but because they represented the modern type they were rejected by the majority of anthropologists. Yet the flints which are found in the upper terrace belong to a stage of evolution long prior to the Mousterian period which marks Neanderthal culture; they are even older than the Hoxne flints. We have again irrefutable evidence here that the modern type of man was in existence long before the Neanderthal man became extinct. The evolution of the modern type of man has to be sought for in a pre-Glacial period, or at an even earlier date in the earth's history. It will be thus seen that England again becomes a leading centre for tracing the later stages in the evolution of man. The geological formations in East Anglia are the most likely of any in Europe to yield convincing evidence. This is a sort of inquiry which medical men more than any are qualified to take a part in, for it is research which requires the greatest patience and care. The import of any discovery of human remains depends entirely upon being able to assign a date to them. Without such evidence they are almost valueless. In burials belonging to periods such as the Saxon, Roman, Bronze, or Neolithic, means of dating may be found by remains of the civilisation found with or over the remains. But in reality we know very little of the people of England during those periods. As regards earlier periods, the evidence becomes almost wholly geological. The age of the stratum—as determined by its position, and by the animal and plant remains, and the kind of flints found in it; the condition of the overlying strata—must all be minutely examined and recorded. The contents of each stratum must be kept separate and preserved. Only those who have paid attention to this kind of investigation know the amount of valuable evidence which has been destroyed through ignorance. Only the other day a human skeleton was found at a depth of 16 feet in stratified gravel; it was destroyed because the farmer feared that a coroner's inquest might be held. It is natural, in such circumstances as the possibility of an inquest being required, to send for a medical man, and we hope that every medical man who may be thus called to the scene will remember that to the expert eye extraordinary historical evidence may be revealed.

[1] THE LANCET, March 18th, 1911, p. 722.

Annotations.

"Ne quid nimis."

JANUARY AT HOME AND ABROAD.

THE weather continued mild and rainy in this country until January was about three weeks old, although the mildness was not so marked as during December and the rain was hardly so heavy and persistent. The change to a colder condition came rather suddenly, and the evil effect of the abrupt fall of temperature was considerably aggravated by the strength and penetrating power of the east and north-east winds which brought it about. During the earlier half of the month the thermometer continued to rise to about 50° F. with unusual frequency for the time of year, and frost, even on the grass, was seldom experienced at night. In the more northern parts of the kingdom there was a cold snap, with heavy snow, round about the 7th, and a good deal of snow accompanied the low temperature of the latter days of the month in the western and northern districts. Over the country generally the relative warmth of the nights, more than the warmth of the days, contributed to maintain the mean temperature of the month much above the ordinary level for January. This was especially true of the south and south-east of England. In the metropolitan area there were, until the 25th, only two or three nights with a minimum temperature (as recorded by the sheltered thermometer) below 32°, and in spite of the severe frosts of the end of the month the mean minimum temperature for the whole period was at least 2° above the average. Hampstead was the coldest of the metropolitan observing stations during the daytime, and Westminster the mildest, the former having a mean maximum temperature of 42·4° and the latter a mean of 45·1°. The nights, however, were slightly milder at

Hampstead than at the more outlying districts of Kew and Greenwich. The central district of Westminster was, as would have been expected, the mildest at night, its mean minimum temperature being 39°, or about 3° higher than at Kew and Greenwich. At Hampstead the thermometer remained below 40° during the whole 24 hours on eight days, while at Westminster a like occurrence was only recorded on four days and at Kew on five days. Very few days passed in any part of the kingdom without more or less rain (or snow). In London, regarded as a whole, there were as many as 22 days with a measurable quantity of rain, and the aggregate fall—nearly 3 inches at Kew and Greenwich, and between 3 and 4 inches at Westminster and Hampstead—was much in excess of the normal. A rainy month is occasionally a decidedly sunny one also, but it was not so in January. The sun was much in default both in the metropolis and in the country generally. In the City the total number of hours of bright sunshine was only five, and in Westminster nine; these figures are less than half the January average. The more outlying districts naturally had a better record, but even there the figure was only equal to about half of that usually recorded in January. Kew had 20 hours, Greenwich 27 hours, and Hampstead 29 hours. In London as a whole there were no less than 20 days without any bright sunshine. On the south coast of England there were also many days without sun, and the total for the month was only about 50 hours. At Paris, where also the weather was mostly mild and often wet, the sun only shone for 36 hours. In the southern countries of the continent the general state of the weather was hardly so bright as usual, although it was not cold for the time of the year. In Italy there was much rain, alternating with fair but not always bright weather, and on the Riviera the rain was unusually frequent. At Nice as many as 14 days brought more or less rain, and all of them were after the 10th. The total fall for the month was as much as 6·1 inches, or about twice as much as in London. In the matter of temperature, however, the Riviera had a great advantage over the warmest part of this country. Frost, except once or twice on the grass, was almost unknown, and the mean temperature of the afternoons exceeded 50°. At Nice it was 51°, and at some other places a little higher. At that resort, where the thermometer is apt to fall to a rather lower figure during the night than at most other places on the Riviera, the mean minimum was 40°, or about 4° above that in the London suburbs, and 1° above that at Westminster. On 22 days the sheltered thermometer rose to 50° or above, and on one (the 7th) touched 61°. In the south of Spain the weather was rarely at all cold, but rough winds and rain were experienced much more frequently, and at Malta and in Sicily the weather was also of an unsettled character, with somewhat sudden changes in temperature following a shift of the wind from the southward to the northward. Along the coast of Algeria a fairly uniform and high temperature was maintained, and although the wind was sometimes stormy and rain not very uncommon, the sun was never absent during long intervals. As a rule, the sheltered thermometer either rose to nearly 60° by the afternoon or went beyond it, and on a few occasions when the wind chanced to come from the southward it touched the 70° point. Switzerland and the central countries of Europe had somewhat varied weather, but taken as a whole it was not unseasonable. Severe frost was experienced during nearly half of the month, the cold being very intense in Germany and Austria. On many occasions the thermometer remained below 20° throughout the day, and fell to about 10° at night. Since February began, however, this record has been beaten in Germany, where the temperature has fallen below zero Fahrenheit.

ABDOMINAL PAIN AS A PREMONITORY SIGN OF DIABETIC COMA.

A CURIOUS premonitory symptom of diabetic coma is abdominal pain. Though mentioned in the text-books, it has not received much attention, and its pathogenesis is not well understood. It has received more attention in France than in this country. Jaccoud has described a "peritonitic form" of diabetic coma in which abdominal pain is the dominating symptom. Recently, at the Congress at Lyons, M. Marcel Labbé and M. Blum assigned a special importance to epigastric pain as a symptom. In the *Progrès Médical* of Dec. 2nd, M. Pierre Lereboullet has published an important paper confirming the great significance of epigastric pain as premonitory to diabetic coma. He relates two cases. A medical practitioner, aged 53 years, who had suffered from diabetes for a long time, was for some days so fatigued that he obtained a locum tenens, but there were no particular symptoms until the night of August 22nd, 1907, when he complained of severe pains in the epigastrium, slightly greater on the right side and radiating to the shoulder. The pains occurred in crises lasting some minutes, and were not accompanied by vomiting. In the morning M. Lereboullet saw him, and his first impression was that he was suffering from hepatic colic. But though the liver was slightly enlarged the region of the gall-bladder was not tender. The abdomen could scarcely be described as distended, and otherwise was negative. The intensity of the pains also suggested tabes, but there were no signs of this disease. But another symptom struck M. Lereboullet—Kussmaul's dyspnœa, with deep and difficult inspiration and sudden expiration, the patient nevertheless remaining in the dorsal decubitus position. The heart was normal and the pulse little accelerated. On bringing together the two symptoms, epigastric pain and dyspnœa, and the fact that the patient was a diabetic, M. Lereboullet feared the imminence of diabetic coma. Examination of the urine showed an abundance of sugar and Gerhardt's reaction. During the day, in spite of the administration of sodium bicarbonate in large doses, the pain persisted and the abdomen became tympanitic, and there was constipation. On the 24th the tympanites was increased, and the attacks of pain were still marked but less frequent. The pain was more diffuse. The temperature was subnormal and the patient became comatose. Death occurred some hours later, about 36 hours after the onset of the epigastric pain. In the second case M. Lereboullet saw in consultation a man, aged 60 years, in whom painful epigastric crises had suddenly appeared some hours previously. The abdomen was slightly distended and was tender only in the epigastrium. The temperature was normal and the pulse good. The patient had suffered from diabetes for a long time. The epigastralgia of the previous case caused M. Lereboullet to study the respiration which was dyspnœic, and he was inclined to think that the symptoms were premonitory of diabetic coma. Coma supervened and death occurred 11 hours after the onset. A long time ago Grube of Neuenahr described in diabetics a condition similar to the gastric crises of tabes with acetonuria and a chloroform-like smell in the breath, but terminating in recovery. His cases differed from those now described only in intensity. M. Lereboullet adopts the view that the pain is due to some auto-intoxication acting on the solar plexus. A similar pain has been described in uræmia and puerperal eclampsia. He points out the importance of recognising this pain as a premonitory sign of diabetic coma, for this enables the alkaline treatment to be adopted early. We may add that its recognition is important in another respect. In an annotation in THE LANCET of Nov. 27th, 1909, entitled "Abdominal Crises in Diabetes," we noticed a paper by two Melbourne observers, Mr. R. M. Downes and Dr. R. A.

O'Brien, in which an abdominal crisis occurred in two cases of diabetes, and suggested to several observers the necessity for abdominal operation. A well-nourished boy, aged 14 years, was admitted into the Melbourne Hospital in the early morning as a case of acute intestinal obstruction. At 6.30 A.M. on the previous day he vomited, and he seemed unwell during the rest of the day. Towards evening he complained of pain across the lower abdomen, and this increased up to the time of admission. For 36 hours neither fæces nor flatus had been passed, though he attempted to go to stool several times. During the day he vomited three or four times. About two hours before admission he became restless with a vacant expression. On admission he was only semi-conscious. He had suffered from diabetes for 18 months. The abdominal muscles were board-like. Mr. G. A. Syme was about to operate when the urine was found to contain much sugar and to give the ferric chloride reaction. The coma increased and death occurred on the following morning. At the necropsy the intestines were found normal. In the second case the glycosuria had disappeared at the time of the crisis, but the urine contained diacetic acid and a trace of acetone, which was attributed to intestinal obstruction. The moral is that the urine should be examined not only for sugar but for diacetic acid in all acute abdominal cases. It is noteworthy that while M. Lereboullet describes the abdominal pain as "épigastralgie," the Australian observers do not specially locate it in the epigastrium. Further, vomiting was present in both their cases, while the French writer noted its absence in his.

THE REHOUSING AT LIVERPOOL CRITICISED.

THE *Welldoer* is a monthly periodical which seeks to promote the organisation of charitable work in Liverpool, to awaken the public conscience in regard to the existing widespread distress, to criticise the management of local charities, and to deal with sociological questions generally If all this can be well done it will be very useful and good work, but the greatest care must be taken not to depreciate genuine endeavour. We have been favoured with an advance proof of an article that is about to appear on Liverpool rehousing, wherein it is suggested that about £1,000,000 have been spent on rehousing the Liverpool poor, and that the poor are not rehoused. We are told, "The slums have gone! Long live the slums!" This is a matter to which we have also given a good deal of attention, not only in London, in various parts of Europe, and in the United States, but likewise at Liverpool, and for the enterprise displayed in Liverpool we have expressed genuine admiration.[1] While congratulating the authorities at Liverpool for having placed their city in the forefront with regard to town planning and housing reform, we were never so sanguine as to imagine that they had abolished all their slums or that they had succeeded in satisfactorily rehousing all the poor people who were driven out of such slums as were abolished. But more care has been taken at Liverpool than is usually the case to admit only very poor people as tenants in the working-class dwellings built by the corporation. These tenements could easily be let at higher rents to a much better class of tenants, but to the great credit of the municipality of Liverpool they have considered the needs of public health and of the poor as of far greater importance than financial benefits. The article in the *Welldoer* admits that probably 50 per cent. of the dwellers of the ancient slums have been rehoused in the corporation buildings. If so, this is a higher proportion than obtains elsewhere; and to say further that these 50 per cent. are the *élite* of the dispossessed does not alter the fact. It shows that the problem is only half solved, and that this is perhaps the easier half; but something has been accomplished, be it only the easier half of so formidable a task.

[1] THE LANCET, June 18th (p. 1718) and July 2nd (p. 60), 1910.

THE DIAGNOSTIC VALUE OF ENLARGED LATERAL THORACIC GLANDS.

IN the *New York Medical Journal* of Dec. 9th, 1911, Dr. Morris Manges has discussed the diagnostic value of enlarged lateral thoracic glands, a point which has received little attention. In two cases of pulmonary growth he found small glands in the fourth and fifth intercostal spaces in the axillary line which on excision proved to be carcinomatous, and thus confirmed the diagnosis. This led him to investigate the subject. It may be remembered that the lateral thoracic lymphatics and glands follow the long thoracic vessels and convey the lymph from the lateral wall of the thorax, and that they communicate with the central group of axillary glands, which in turn empty into the supraclavicular glands. By anastomoses the lateral thoracic glands communicate with the subscapular, anterior thoracic, brachial, and mammary lymphatics. An exhaustive paper on enlargement of these glands has been published by von Zebrowski, who has found enlargement in 20 per cent. of all tuberculous patients and 2·5 per cent. of non-tuberculous.[1] In pulmonary or mediastinal conditions the lateral thoracic glands are seldom bigger than a pea or bean. This enlargement von Zebrowski explains in two ways. First, perforating lymphatics pass through the intercostal muscles and anastomose with the lymphatics of the costal pleura; when pleural adhesions exist there is also a communication with the pulmonary lymphatics. Another communication was worked out by Stephanis, who, by injections, discovered a retrograde path between the lateral thoracic glands and the posterior mediastinal glands through the medial intercostal lymphatics to the pleural lymphatics. Von Zebrowski states that there is a distinct relation between enlargement of the lateral thoracic glands and pulmonary tuberculosis. He found the enlargement usually on the side of the lung involved; it diminished with improvement of the pulmonary condition and sometimes disappeared with cure. Conversely the enlargement increased as the pulmonary condition became worse. He proved the presence of tuberculosis in the glands by microscopic examination. As tuberculosis is the commonest cause of the enlargement, its existence should cause the lungs to be repeatedly examined for early signs, which it may precede. Palpation of these glands should therefore be part of the routine examination of the chest. In this connexion the opinions of authorities with regard to axillary and cervical adenopathy is of interest. Sir William Osler states in his "Practice of Medicine": "Preceding the onset of pulmonary phthisis for months, or even for years, the lymph glands of the neck and axilla may be enlarged. These cases are by no means infrequent, and they are of importance because of the latency of the pulmonary lesions." The only writers besides von Lebrowski who specifically refer to enlargement of the lateral thoracic glands in tuberculosis are Hochsinger and De la Camp, who both regard this as positive evidence of bronchial or pulmonary tuberculosis in children, especially in infants, provided there is no inflammatory condition of the neighbouring skin. Dr. Manges has not found the glands so frequently enlarged as von Zebrowski claims. A routine examination has yielded only 25 cases in two years. In 4 cases pulmonary tuberculosis was present, and in all the enlargement was bilateral. Other conditions present were as follows: pulmonary and

[1] Deutsche Medizinische Wochenschrift, July 14th, 1910.

pleural neoplasms (5 cases; in all a gland was excised and examined; carcinoma was found in 2 and hyperplasia in the other 3); mediastinal neoplasm (1 case, microscopic examination showed only hyperplasia); carcinoma of breast (2 cases); carcinoma of liver (3 cases; all on right side; in 2 excised glands showed carcinoma); carcinoma of stomach (1 case with enlarged gland in fourth left intercostal space); carcinoma of skin (1 case); general carcinosis (1 case); lymphatic leukæmia (1 case); perihepatic abscess (1 case, an enlarged gland in the fifth space which disappeared after incision and drainage); Hanot's cirrhosis of liver (1 case). Dr. Manges concludes that while enlarged lateral thoracic glands are by no means frequent, they may at times give warning of pulmonary tuberculosis. They may also be of value in corroborating suspicions of malignant disease of the lung, pleura, posterior mediastinum, breast, or other distant organs. Enlargement does not necessarily denote either tuberculous or malignant disease, but may be due to hyperplasia: excision and microscopic examination are necessary to complete the proof.

OCCLUSION OF THE POSTERIOR INFERIOR CEREBELLAR ARTERY—A DEFINITE SYMPTOM-COMPLEX.

IN the *Albany Medical Annals* for October, 1911, is a valuable paper by Dr. Hermon C. Gordinier, of Troy, N.Y., on the occurrence of a very definite series of clinical symptoms from thrombosis or occlusion generally of the posterior inferior cerebellar artery. These are so characteristic that it is curious so few instances of the condition have been put on record. Five cases have been reported in America, exclusive of three published in the present paper, one in England,[1] two in France, and 16 in Germany. It may be recalled that the posterior inferior cerebellar arteries are the longest branches of the vertebral arteries. They arise from the latter about 2 centimetres below the formation of the basilar artery, and pass outwards and backwards, winding round the side of the medulla oblongata between the hypoglossal and pneumogastric nerve roots; they then leave the side of the medulla along the inferior cerebellar peduncle and so reach the vallecula of the cerebellum, on the under surface of which they anastomose with the middle and superior cerebellar arteries. Occlusion of the posterior inferior cerebellar artery, owing to this free anastomosis, concerns mainly, if not solely, the small terminal branches which that vessel gives to the medulla as it winds round it. These small terminal vessels supply a sharply limited area on the lateral aspect of the medulla, which includes the formatio reticularis and restiform body, and is bounded by the olive anteriorly. Its vertical extent is, roughly speaking, from the middle of the hypoglossal nucleus to about the level where the restiform body passes into the cerebellum. The main structures implicated in this area are the spino-cerebellar tracts of Gowers and Flechsig; the descending roots of the fifth cranial nerve and perhaps also of the eighth; olivo-cerebellar fibres; the intramedullary parts of the ninth and tenth cranial nerves; and certain important vasomotor and sympathetic fibres running in the formatio reticularis. Occasionally the auditory nuclei and nerves may be involved, but not the pyramidal tract, the seventh or sixth cranial nerves, nor the fillet, unless the thrombus extends into the vertebral artery. All these structures are implicated by a lesion the cross-section of which is less than that of a threepenny-piece. The clinical symptoms, in a pure case, are as follows: sudden onset without loss or disturbance of consciousness; crossed analgesia and loss of temperature sense—face on same side as lesion, body, arm, and leg on side opposite to lesion (face from implication of the descending root of the fifth, opposite side of body from implication of spino-thalamic sensory fibres in the formatio reticularis); no impairment of touch, or of localisation (the median fillet intact); ataxia in limbs on same side as lesion (involvement of spino-cerebellar tracts and olivo-cerebellar fibres); tendency to fall to the side of the lesion (restiform body); vertigo, sense of rotation, giddiness, vomiting (vestibular and vagus nerves); paralysis of the palate, vocal cord, and muscles of deglutition on the same side as the lesion, with impaired sensation of pharynx (ninth and tenth cranial nerves); involvement of cervical sympathetic on same side as lesion—enophthalmos, unilateral sweating, ptosis, small pupil—(central sympathetic tracts in formatio reticularis). Dr. Gordinier describes three excellent cases of this remarkable affection, which presents a clear and definite syndrome, easily recognisable clinically and pathologically. The multiplicity of the symptoms in association with the small region affected constitutes the striking feature of the syndrome. Any case which shows a crossed anæsthesia (pain and temperature) and unilateral paralysis of palate and vocal cord should always suggest a lesion in the distribution of the posterior inferior cerebellar artery in its medullary part, and when the other symptoms enumerated above—e.g., unilateral ataxia and unilateral involvement of the cervical sympathetic, are present, the exact site of the disease can be delimited with conspicuous ease and certainty.

[1] S. A. K. Wilson: A Case of Thrombosis of the Left Posterior Inferior Cerebellar Artery. Proceedings of the Royal Society of Medicine, vol. ii., February, 1909 (Neurological Section).

THE MINISTRATIONS OF THE EARTHWORM.

AMONGST other interesting articles published in the January number of *Science Progress* is one by J. Newton Friend, Ph.D., D.Sc., on the aeration of the soil by earthworms. As the writer points out, the chief activity of worms lies in their power of excreting acids in their castings, of exhaling carbon dioxide, and of aerating the soil both by mechanical and by chemical means. He has made a number of observations on these points which show that the rôle of the earthworm amply repays study. Worms effect the aeration of the soil in a variety of ways. In burrowing through the soil the worms render it more porous and permeable to gases, not merely by virtue of the air spaces formed, but by reason of the fact that the soil is thus continually kept in gentle motion. Again, the soil passing through the bodies of worms is excreted in a finer condition, being ground by attrition through the intestines. This increased fineness up to a certain limit means increased area, and hence greater susceptibility to the action of gases; beyond this limit the particles begin to cling together, and a proportionately less porous mass results more resembling clay than ordinary soil. It was Darwin who estimated that no fewer than 15 tons of soil annually pass through the bodies of worms for every acre. Further, worms breathe in oxygen and exhale carbon dioxide, and the latter gas, as is well known, readily dissolves in water, forming an acid solution which will render alkaline earths and metallic oxides—e.g., iron—soluble. The amount of carbonic acid gas exhaled in the course of a year by an active worm-inhabited acre would amount to 29·6 kilogrammes, or 15,000 litres. The interchange of oxygen and carbonic acid gas effected by worms is thus considerable. Worms materially aid in producing soluble salts of iron in the soil when other agencies (e.g., dilute mineral acids) fail. The iron is eventually given back to the soil in a more soluble condition, and presumably in one which can be directly absorbed by plant roots. As Dr. Friend points out,

worms probably have an important ministry to perform in the soil, and it is to be hoped that further researches in this direction will be undertaken, for the habits and distribution of the earthworm appear to have received little attention since the days of Darwin, or with the aid of modern scientific apparatus.

THE SPIROCHÆTA GALLINARUM.

THE study of the life-history of the malarial parasite was greatly assisted in its early stages by investigations made on allied organisms occurring in the bird. The research on the life-history of the spirochæta gallinarum conducted by Mr. E. Hindle, one of the Beit Fellows, is similarly of value, since the comparative study of this organism may serve to fill lacunæ in our knowledge of the allied spirillum of African tick-fever. Mr. Hindle has brought forward evidence making it almost certain that longitudinal division of the organism does not occur, and explains the deceptive appearances which have led to that belief. The work of previous observers on the formation of coccoid bodies at the crisis of the disease and as the result of drug treatment was confirmed, and Mr. Hindle agrees with Leishman that transmission of the disease is not caused by the direct bite, but by the infection of the bite with the coccoid bodies contained in the coxal fluid and excrement. The coccoid bodies mentioned above do not usually develop in the fowl, but similar bodies derived from spirochætæ which have been ingested by, and have bored their way into, the cells of the various organs of the tick will, when they gain access to the blood of the fowl, develop into the ordinary spirochæta form. This last step has, however, not been followed. Experiments suggested that possibly it is the coxal fluid which enables the coccoid bodies derived from the tick to develop into spirilla in the fowl. The development of the coccoid bodies into spirochætæ and fusiform bacilli has been followed in the tick and in the eggs laid by the infected ticks, and it was shown that larvæ hatched from these eggs could infect the fowl when fed upon them. Experiments appeared to show that in order that the coccoid bodies may develop into spirochætæ they must escape from the cells into a fluid medium, which in the tick is either the cœlomic fluid or the contents of the gut.

MESO-THORIUM IN MEDICINE.

AT the conclusion of his lecture before the members of the Royal Institution on Feb. 2nd on the Vital Effects of Radium and Other Rays, Sir James Mackenzie Davidson dwelt upon the possibility of other radio-active substances than radium proving of value in treatment. Uranium, thorium, and actinium, he said, had all been suggested in this connexion, but they were too feebly radio-active to possess any real efficacy. The discovery by Otto Hahn of the substance known as meso-thorium, however, had aroused considerable expectation. Meso-thorium, which was one of the disintegration products of thorium, and was found in the course of an attempt to separate radio-thorium directly from thorium, emitted the same rays as radium, and weight for weight was more powerful. As the supply of thorium was much larger than that of pitchblende, from which radium was obtained, they might hope to have a larger supply of meso-thorium than of radium at the general disposal. It would cost much less, but, on the other hand, it had a short life of only about seven years. The lecturer produced a tube of meso-thorium, which, he said, was equivalent to 10 milligrammes of pure radium. He had applied this to a chronic patch of X ray dermatitis on his hand, and a reaction followed 15 days after application. This latent period was rather longer than in the case of a similar application of radium, which he had used successfully in the treatment of his X ray burns, but the result with the meso-thorium promised to be equally favourable. As to radium-therapy, the lecturer said that in the condition of the eyelids known as "spring catarrh" and in X ray dermatitis he had proved it to have a value which no other method of treatment apparently possessed. Radium also had a destructive influence upon large rapidly-growing tumours like sarcoma, which could be subverted by the method of burying tubes within them, thus furnishing another illustration of the fact that radium, like other rays, concentrated its attack upon the young and most rapidly-growing cells. That was probably the reason why sarcomas were so vulnerable to attack when compared with carcinomas, which were of slower growth. But in spite of its greater potency and convenience in application, the same thing had to be said of radium as he had already said of the X rays, that it could not in any sense be looked upon as a cure for cancerous growths of large size. It would inhibit the growth of such tumours and destroy them locally, but rarely completely, and it did nothing to prevent the usual secondary deposits. With regard to the emanation of radium, he produced a standard which Sir William Ramsay had given him, containing in a little bottle 1/40,000th of a milligramme of pure radium. Sir William Ramsay's standard is apparently intended to replace the Maché unit.

TRACHOMA BODIES.

ANY investigation, even of a negative character, which serves to throw light on the cause of the infectious character of so troublesome a disease as trachoma is to be welcomed. The bacteriology of trachoma is at present a series of negations, and this is especially unfortunate, as the disease has such ill-defined clinical boundaries that the discovery of the specific cause would alone render possible any real advance in its study. Secondary infections are so frequent in this disease that not unnaturally numerous organisms have been credited with its causation, whose claims in this respect have subsequently been shown to rest on no substantial basis. One of these, the trachoma body described by Halberstaedter and Prowazek, has claims which are difficult to disprove. These bodies were regarded by their discoverers as being true parasites belonging to a new group of intracellular organisms—the chlamydozoa. Their non-specific character has, however, been shown by finding them in cases other than trachoma, and even in very slightly inflamed or normal conjunctivæ. A recent paper by Dr. S. B. Wolbach and Dr. S. Hanford McKee carries the matter further by furnishing a probable explanation of the true nature of these trachoma bodies, which, as the authors show, occur only in those portions of the conjunctival epithelium which are the most injured, and where typical mucus-secreting cells are absent. A careful study of the bodies by smear preparations and in sections, together with comparative studies of other mucus-secreting surfaces, have led these investigators to the conclusion that the trachoma bodies represent mucous secretion under pathological conditions, and consequently that their parasitic nature is disproved.

UTERINE CANCER AND ITS EARLY DIAGNOSIS: ORIGINAL RESEARCH FROM SUBJECTIVE SYMPTOMS.

Dr. E. Atlee, in a recent paper on the Early Diagnosis of Uterine Cancer, points out that all clinicians realise the importance of obtaining the earliest possible knowledge from subjective symptoms of cancer formation. He maintains that the victims of uterine cancer are frequently women of excessive weight, but the scientific physician has not as yet taken into consideration the possibility that the feature of weight may be a help in connexion with an early diagnosis of the disease. The point of importance, according to the author of this paper, is not the actual weight of

the individual, but the comparative weight of that individual at different periods. In the furtherance of this view 24 cases have been carefully studied, and the testimony points almost conclusively one way—viz., that the incipient stage of cancer of the uterus is coincident with the maximum weight of the woman irrespective of age, and that the duration of this incipient stage may vary as does that of the recognised stage of the disease. It is not maintained that the existence of the maximum weight is alone sufficient to determine the presence of uterine cancer, but associated with the history of maximum weight will be found one of unexcelled health and strength. A further point insisted on is that this maximum weight, health, and strength have been attained rapidly subsequent to previous imperfect health conditions. A chart is given of what Dr. Atlee believes to be the probable characteristic phenomenon in the progress of cancer cases covering a period of 12 years or more. In this chart a period of poor or indifferent health is represented as followed by a period of rapid return to perfect health and strength, with maximum weight, and then the occurrence of suspected and recognised cancer. Curves are also given for uterine diseases other than cancer, and for cancerous diseases in women other than in the uterus, and in both these conditions the curve is represented as being one mainly of a continued period of impaired health. Lastly, a table is given to show that the maximum weight of healthy women generally occurs at an age other than that at which the greatest incidence of cancer of the uterus occurs. Dr. Atlee is appealing to physicians to fill up tables of questions in order to extend his researches so as to obtain a larger series of cases. The idea is a novel one, and, of course, a very much larger amount of material is necessary than the 24 cases on which the author appears to rest his hypothesis. And we are not told how the curves have been constructed; they appear merely to represent the author's impressions. It seems to us unlikely that further investigations will corroborate the suggestion put forward by Dr. Atlee.

THE VISITATION OF THE SICK.[1]

IN mediæval times the sick man, with the sense of humour which characterised mediæval religion, added some private devotions of his own to the official services for the sick prescribed by the Church. That is to say, before he took his medicines he was accustomed to repeat Psalms LV. and LVIII. in the Vulgate, which correspond to LVI. and LIX. in our Book of Common Prayer. In the former of these psalms the patient declares that he will not fear what flesh can do unto him, and in the second he prays to be delivered from the bloodthirsty men, "de viris sanguinum salva me." Whether these aspirations were used by the patient in regard to his parish priest or his doctor, or merely symbolically in reference to the powers of evil who were then credited with bringing sickness, cannot now be definitely stated, but it seems that the mediæval patient had qualms as to both his spiritual and his bodily advisers. Sickness is ever with us, and there is as much need now, as in former days, for wise coöperation between the physicians both of the soul and of the body. The little book now before us contains much sound practical common sense within the 50 pages which are allotted to instruction by the medical man and the cleric respectively. Each little treatise may well be studied by the members of the other profession, and we are glad to see that both authors recognise a fact that is sometimes in danger of being forgotten by both medical men and the clergy—namely, that a patient, whether he be sick in soul or body, or both, is first and foremost a man and not merely "a case." Sir Dyce Duckworth in his preface expresses an "entire concurrence with the opinions set forth," with which we are in general agreement.

[1] Practical Hints for Pastoral Work among the Sick. By H. Gordon Mackenzie, M.A. Ox. n., M.B. Durh., and Notes and Suggestions on Visiting the Sick, together with Short Service and Private Devotions for the Sick, compiled by the Rev. Archibald O. Hayes, M.A., Hospitaller of St. Thomas's Hospital. With an Introduction by Sir Dyce Duckworth, Bart., M.D. Edin., LL.D. London: Kegan Paul, Trench, Trübner, and Co., Limited. 1911. Pp. 80.

OUTBREAK OF TYPHOID FEVER DUE TO A BACILLUS CARRIER OF 46 YEARS' STANDING.

IN the *Journal of the American Medical Association* of Jan. 6th Dr. C. Bolduan, acting assistant to the general medical officer, and Mr. W. C. Noble, bacteriologist, department of health, city of New York, have reported an outbreak of typhoid fever due to a bacillus carrier under remarkable conditions. Towards the end of August, 1909, a sudden increase in the number of cases of typhoid fever reported from the boroughs of Manhattan and Bronx attracted attention. A certain milk-supply was common to all and was cut off on Sept. 1st. However, additional cases were reported in diminished number all through September, making a total of several hundred. The cases reported in September were ascribed to secondary infection in the city. On tracing the milk-supply back to its origin, it was found to come from the village of Camden. The former manager of the creamery there was suffering from typhoid fever, but judging from the date of onset was one of the victims of the infection and not its cause. Further inquiry showed that there had been undue prevalence of typhoid fever at Camden for years. On one dairy-farm there had recently been a case of typhoid fever. The dairyman was born in Wisconsin in 1848 and had typhoid fever there in 1863 or 1864. He went to Camden in 1866 and began to sell milk in 1873. In 1878 his two-year-old daughter had enteric fever, and during her convalescence her grandmother, who had nursed her, became very ill and was delirious for three weeks. The disease was called "gastric fever." In 1886 a man working on the farm was very ill with fever for several weeks, which was diagnosed "gastric fever." In 1893 another daughter was ill in the autumn and typhoid fever was diagnosed. In 1897 still another daughter had what was called "intermittent fever." In 1893 another worker on the farm had typhoid fever. In 1909 still another worker died from the disease. Such a history suggested a bacillus carrier, and specimens of fæces were obtained from the whole household. Those of the dairyman gave an almost pure culture of typhoid bacilli on Conradi-Drigalski plates. Subsequent examinations made after a month and a year gave similar results. This dairyman was a better-class farmer who kept his home and his dairy much cleaner than the average dairyman. Moreover, he was personally clean. The case is important, as it shows that milk may be infected by a typhoid carrier, though he be cleanly in his habits.

THE first of the three Lettsomian lectures on Glycosuria was delivered by Dr. A. E. Garrod before the Medical Society of London on Feb. 5th. The second and third lectures will be delivered on Feb. 19th and March 4th respectively. The anniversary dinner of the society will be held on March 6th, at 7.30 P.M., at the Whitehall Rooms, Hôtel Metropole.

THE Harben lectures of the Royal Institute of Public Health will be delivered in the lecture-room of the institute on Feb. 26th, 27th, and 29th, at 6 P.M., by Professor Simon Flexner (director of the Rockefeller Institute for Medical Research, New York), the subject being "The Local Specific Treatment of Infections."

AN EXAMINATION OF THE MEDICAL PROVISIONS OF THE NATIONAL INSURANCE ACT.

BY WILLIAM A. BREND, M.A. CAMB., M.B., B.SC. LOND.,

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I.

UNDER any circumstances the National Insurance Act is bound to have a far-reaching effect upon the future of medicine in the British Isles. If it comes into operation in its present form, it will affect at once and directly more than 13,000,000 people. If for any reason some of its provisions should be found unworkable, sooner or later they will be succeeded by other efforts of the Legislature to bring about the result desired. For the Act must not be looked upon as an isolated step, but as the culmination of a movement for the provision of better medical attendance and treatment among the working-classes which has been growing for years. In its general principles it has received the assent of both the great political parties of the State, and the responsibility therefore of carrying it, or an analogous measure, to a successful issue becomes a national one. It behoves the medical profession accordingly not to commit itself to a line of action definitely hostile to the Act until its provisions and their probable effects have received the minutest consideration. Further, the possibility of the introduction of alternative schemes must constantly be kept in mind. It might be better to "bear those ills we have, than fly to others that we know not of."

It is not necessary here to emphasise the deplorable lack of adequate medical attendance and treatment among the working classes. Its evils have been pointed out by public and private inquiries, and recently both the Majority and Minority Reports of the Royal Commission on the Poor-law stated that ill-health was a fruitful source of destitution. The conditions under which medical attendance is given are frequently demoralising both to patient and doctor. The medical profession would be the first to admit that something must be done, and the Insurance Act is at once a recognition by the State of its responsibility and an attempt to discharge its obligations. It would be waste of time now to discuss alternative schemes, but one which has been mentioned, though not by any responsible person, deserves passing consideration. It has been suggested that medical officers should be appointed at fixed salaries to attend insured persons in each district, and it is calculated that nearly 7000 could be so appointed at salaries of £600 a year each, for the amount it is now proposed to spend on medical benefit. If such a scheme were seriously brought forward united medical action would be more difficult to secure than at present, and hostility to it might be ascribed by public opinion to regard for vested interests.

One other general effect must be mentioned. The Act establishes a closer relationship between the State and the medical profession than has ever existed before. If the State is going to draw so largely upon the services of the medical profession it becomes more than ever its duty to take note of its recommendations and to safeguard it in the discharge of its services. Public opinion will demand that this be done. In the past the profession has had just cause to complain of the treatment it has received at the hands of the Legislature. Important matters, as, for example, the reform of the laws relating to coroners and inquests, or to the certification of death, have been postponed indefinitely. Measures such as the Midwives Act and the Notification of Births Act have imposed fresh duties upon medical men for wholly inadequate remuneration or even none at all. An Act to prevent the abuse of medical titles, and restrict the operations of herbalists, patent medicine vendors, and quacks of all sorts is long overdue. In its new position the medical profession will have an increased right to demand the remedying of these grievances, and the organisation which the Insurance Act has led to will give it added power to enforce this right.

In the opinion of the writer it is open to question whether the Insurance Act has yet received adequate and unbiassed consideration from many medical men. Our political system almost necessarily entails that a person approaches such a measure prejudiced either for or against it according to the party to which he belongs. Condemnation of the Act as "socialistic," even if justified, merely tends to obscure the purely medical points at issue and lends colour to the assertion that political bias is being displayed. The time which elapsed between the introduction of the Bill and its passage into law did not permit of full determination being made of the effects of the scheme, for many of these depended upon the collection and collation of statistics. Finally, few doctors can have had leisure to study in detail for themselves a complex Act of 83 Sections and 5 Schedules, which underwent frequent drastic changes during its progress.

Some Errors.

A word of caution is required as to the necessity for meticulous accuracy in statements made to illustrate the grievances of the medical profession. Success in any campaign depends largely upon the support of public opinion, and this will not be won if assertions are made which can be easily refuted or are based upon unjustifiable assumptions. This has sometimes been the case, and the following are cited as instances of the errors medical men are liable to make under the influence of haste or indignation.

In the *Times* of Jan. 16th a medical man quoted and amplified figures which tended to show that, on the average, each doctor who works under the Act will receive in respect of insured persons "the magnificent gross sum" of £253 per annum, "from which one-third to two-thirds, according to locality, will have to be deducted for horses, grooms, motors, chauffeurs, rent of consulting-rooms, rates, and in most cases cost of drugs and dispensing—and this for men whose professional education has cost from £1000 to £2000 ..... and whose goodwills have cost on an average £1000 to £2000." He wrote as though £253 were to be the total average medical income of the future, whereas it will be derived from less than one-third of the community, and that roughly the poorest third. The figures are probably not correct, but from his argument it follows that were the whole population of Great Britain, instead only of 13,000,000, insured at the same rate, the average medical income would be nearly £800 per annum, a position not so distressing as to excite much lay sympathy.

A frequent fallacy is to compare insured persons with patients. Instances of this occur in the leading article of the *Times* of Dec. 29th, 1911, and in a letter from a medical man in the same journal of Jan. 17th. In the latter case the writer states that 41 per cent. of his private patients will become contract patients under the Act. He finds that now he sees each of these on the average five times in the year, and receives 10*s.* 6*d.* per individual. Deducting 1*s.* 6*d.* for medicines he will in the future, he says, receive 4*s.* 6*d.* from each of instead of 9*s.* He concludes, therefore, that he will lose one-fifth of his income. The writer forgets that the names on his books are only those of patients—i.e., persons who have actually received medical attendance within the period under review. Under the Act he will be paid in respect of a larger number of insured persons some of whom will not consult him at all, and others much less than five times. He has probably no means of computing what this number will be. As regards attendances, if the average number per patient is five, the average number per insured person is likely to be appreciably less.

In the *British Medical Journal* of Jan. 13th is an editorial paragraph headed "Payment under the Insurance Act," in which certain figures are quoted from statements published by medical men in support of the demand for a higher rate of remuneration. The first of these is a long detailed statement from two medical practitioners which appeared in the *British Medical Journal* of May 27th, 1911. Careful study of this document shows that the conclusions finally drawn anticipating substantial loss under the Act are based upon certain untenable assumptions. Further, the figures given for actual attendances upon all classes during four weeks do not support these conclusions. But in any case the statement is of little value, since it was compiled before the Act was amended. Allowance would now have to be made for the effect of such changes as the imposition of an income-limit for voluntary contributions, &c. The second quotation is from a letter which appeared in the *British Medical Journal* of Dec. 2nd, 1911, wherein a doctor anticipates that he will be required to attend each insured person 6½ times, at an average fee of about 7*d.* an

attendance. These figures, however, are based upon those of a provident dispensary in which all the lives are unselected, and the bulk of the members women and children, and therefore not comparable to the insured population. The paragraph concludes with a statement that "a medical practitioner whose patients mainly consist of insured persons will have to work uninterruptedly for at least 10 hours a day if he wishes to make a net income of even as little as £250 a year." Now this sum will be earned (at 4*s.* 6*d.* a head) if he has 1100 insured persons on his books. If each of these is seen five times during the year, and it will be shown later that the average number of attendances is likely to be less than this, it would be necessary to give on the average 15 attendances a day. It cannot be seriously contended that this would entail 10 hours' uninterrupted work, especially as no time would be spent in dispensing.

Statements such as the above place weapons in the hands of adversaries.

Points to be Considered.

The points about the Insurance Act especially requiring consideration by medical men are the economic position of the beneficiaries, the income limit, the degree of control over administration the medical profession will possess, the work to be done, the remuneration, and the effect upon the progress of medical science. Some of these are covered by the Act itself, others depend largely upon the regulations to be issued by the Commissioners.

The Beneficiaries.

Who will come under the scheme? This is a most vexed question and goes to the root of the medical grievances. The most detailed statement as to the persons anticipated to become insured is to be found in the actuaries' report, and in the appendix to the report are given the numbers engaged in each kind of occupation. It is a valuable and interesting document, but of course some of the conclusions are based upon estimates or assumptions which may in practice prove to be quite ill-founded. They are quoted provisionally in the absence of more reliable figures.

Compulsory contributors.—With certain scheduled exceptions the Act requires all employed manual workers, and all persons otherwise employed whose income from all sources is below £160, to become insured. The most important exceptions are persons employed under the Crown or public authorities, clerks and other salaried officials in railway and other companies, who are already insured for benefits not less favourable than those given by the Act, and school teachers who come under Superannuation Acts. A glance at the actuaries' reports shows that the great bulk of persons in this class will be working men and women. The principal occupations with the numbers engaged therein, according to the Census of 1901, excluding Ireland, are :—

	Employed.	Working on own account.
Domestic offices or services	2,196,147	—
Conveyance by rail, road, sea, docks, &c.	1,385,413	29,460
Agriculture	1,299,347	29,172
Textiles	1,282,765	36,043
Building	1,060,421	52,496
Mines and quarries	913,101	13,215
Dress	902,411	290,131

There are nearly half-a-million general labourers, but the above figures will certainly include practically all good-class artisans, many of whom are accustomed to paying remunerative medical bills. There are also nearly 400,000 persons in positions generally looked upon as better than that of the working man, the most numerous being business and law clerks, commercial travellers, and sick-nurses. Compulsory contributors will endeavour in the first instance to become members of approved societies, and these societies have full power to make their own rules for admission of members, with the one proviso that they may not refuse a person solely on the ground of age. Compulsory contributors who are refused admission become

Deposit contributors.—It is important here to quote the Act. They are defined as "insured persons ..... who have not joined an approved society within the prescribed time, or who, having been members of an approved society, have been expelled or have resigned therefrom and have not within the prescribed time joined another approved society." It is commonly assumed that members of approved societies will be all picked lives, and deposit contributors bad lives. While this will, no doubt, be in the main true, it will be noticed that it is not the statutory distinction. The Act says nothing about good or bad lives. An approved society may if it chooses admit members without any medical examination at all; it may be quite worth while for some of them to do so. Equally, a person compulsorily insured may fail to become a member of an approved society for reasons other than ill-health. Bad lives may therefore be found among members of approved societies, and good lives among deposit contributors. This is of importance in view of the statement made by the Chancellor of the Exchequer at the Special Representative meeting of the British Medical Association on June 1st, 1911. According to the *British Medical Journal Supplement*, of June 3rd, he said: "There is only one thing I would say about the Post Office contributor, and that is that the 6*s.* basis does not come in in that case. You certainly cannot be expected to take people who are already ill at that rate. The reason we thought the 6*s.* was fair was that you will be getting it for people who were well as well as those who were ill. When you come to the Post Office contributors they would be people who are already ill, and we certainly never contemplated that the 6*s.* should be for those." Now while it is true that this was said *à propos* of deposit contributors, the spirit of the promise clearly is that bad lives shall be treated at a higher rate. As quality of life is not the criterion distinguishing between deposit and other contributors, presumably effect will be given to the promise by means of the regulations which the Commissioners are to issue. If this interpretation is correct, the medical profession will have the advantage of a voice in the framing and carrying out of these regulations which it would not have had if the distinction had depended upon the rules of approved societies. To be able to insist upon a medical examination for all insured persons, irrespective of class, before admission to medical benefit at ordinary rates would be a right of considerable value.

Voluntary contributors.—These are persons not employed within the meaning of the Act, who either (*a*) are engaged in some regular occupation and are wholly or mainly dependent for their livelihood upon the earnings derived by them from that occupation, provided that their total income from all sources does not exceed £160 per annum, or (*b*) have been insured persons for a period of five years or upwards. In the latter case the income-limit does not apply. Under this section it will eventually be possible for persons to derive benefits from the Act who, though starting poor, have become wealthy since they first began to contribute.

The actuaries estimate that the number of persons who will become voluntary contributors, excluding Ireland, is about 616,000, or less than 5 per cent. of the total. Medical men fear that many of their best paying lower middle-class patients will take advantage of these provisions. It is very difficult to determine who will come in, but in making an estimate certain checks in addition to those enumerated above must be borne in mind. In the first place, voluntary contributors have not only to pay their own contributions but also the amount which would have been paid by their employers had they been employed within the meaning of the Act. Secondly, contributors over the age of 45 (and others who fail to join within the first six months) have to pay a higher contribution in accordance with tables to be prepared by the Insurance Commissioners. Thirdly, persons wishing to become voluntary contributors who are refused by approved societies cannot become deposit contributors.[1] They drop out of the scheme altogether. As probably the most frequent ground of such refusal will be ill-health, it means that the worst lives among such persons, and those therefore most remunerative from the medical point of view, must still remain private patients.

The terms of admission to insurance at least are rigidly defined in the Act, and whatever the inducements it may hold out to persons to obtain medical treatment at contract rates, though they can well afford to pay doctors' bills, it is none the less possible that it may check this same abuse in other directions. For the grievance is no new one. It has been a sore point with the profession for a long time that persons in good social position obtain medical attendance through friendly societies. Now some of such persons

[1] This view has been challenged, but I cannot otherwise interpret Sections 1 and 42 of the Act.

at least will be ineligible for insurance in the future, and must perforce attend a doctor privately.

The Income-Limit.

The foregoing considerations apply to eligibility for insurance, but it does not necessarily follow that all insured persons will receive medical treatment at a fixed capitation or other fee. Section 15 (3) provides that—

> The regulations made by the Insurance Commissioners shall authorise the Insurance Committee by which medical benefit is administered to require any persons whose income exceeds a limit to be fixed by the Committee, and to allow any other persons, in lieu of receiving medical benefit under such arrangements as aforesaid, to make their own arrangements for receiving medical attendance and treatment (including medicines and appliances), and in such case the Committee shall, subject to the regulations, contribute from the funds out of which medical benefit is payable towards the cost of medicine, attendance, and treatment (including medicines and appliances) for such persons sums not exceeding in the aggregate the amounts which the Committee would otherwise have expended in providing medical benefit for them.

It is said that this provision is of little value for the reason that it can only be put into force by the Insurance Committees, and that on these the medical profession will have small representation. This aspect of the matter will be considered under the heading of "control of medical benefit." Assuming for the moment that it will be effective, it is obviously a valuable means of checking abuse. For not only will the persons excluded be required to make their own own arrangements, but they will be in a better position to do so inasmuch as they will still receive medical benefit in the form of a sum of money.

The point which in the opinion of the writer is open to question is the advisability of the profession insisting upon a specified income-limit being applied to the whole country by an amending Act; or of local groups of medical men declining to have anything to do with the Act until the Insurance Committees have fixed income-limits. In the first place the profession is not united as to what the amount of income should be. £104 a year has been agreed upon as a compromise, but many doctors think this too high. Further, a man's income is not a satisfactory test of his ability to pay for medical attendance. A single man with 30*s.* a week may be much better off than one with £2 a week who has a wife and family to support. Again, owing to variations in the rates of wages and prices of necessities an income-limit which would be equitable in one district would not necessarily be so in another. By leaving the matter to be determined independently in each locality allowance can be made for varying conditions. Nor is there anything in the Act to prevent two or more income-limits prevailing in one district, income-limits, for example, varying on an ascending scale with the number of a man's dependents. In some localities, too, the medical men might be willing to waive the income-limit or consent to a higher income-limit, in return for an increased capitation fee all round or some other concession. Such details could not be dealt with in an Act of Parliament. In this and other matters much will depend upon the regulations which the Commissioners will issue. Under these circumstances is not the *non-possumus* attitude a little premature? There is no need to come to a decision at once.

The next step presumably is the appointment of the Advisory Committee. Promise has been given that the profession shall have a voice in the appointment of the medical members of the Committee, who must be general practitioners of experience. The profession will thus be able to assist in framing the regulations, without in any way committing itself to working under the Act.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

MEETING OF COUNCIL.

AN ordinary meeting of the Council was held on Feb. 1st, Mr. RICKMAN J. GODLEE, the President, being in the chair.

The SECRETARY reported the death, on Jan. 24th, of Sir Henry Trentham Butlin, Bart., member of the Council and Past-President.

The following vote of condolence was passed:—

> The Council hereby record their deep regret at the death of their colleague, Sir Henry Trentham Butlin, Bart., for whom they entertained the warmest feelings of personal friendship, and they desire to express their very sincere sympathy with Lady Butlin and the other members of the family in their bereavement. The Council do also record their appreciation of the distinction and ability with which Sir Henry Butlin fulfilled the duties of President of the College and member of the Council and their grateful sense of the many services rendered by him to the College and the medical profession. The Council believe that no member of the profession more fully enjoyed the confidence and esteem of his colleagues, and his devotion to duty in failing health and increasing infirmity will be treasured by them as a priceless example of courage and unselfishness. For these reasons, as well as for his admirable skill in practice, they are assured that his name will always be held in honour and kindly remembrance.

It was resolved that Diplomas of Membership should be granted to 91 successful candidates, and that in conjunction with the Royal College of Physicians of London Diplomas in Public Health should be granted to 18 successful candidates.

Mr. J. Ernest Lane was re-elected a member of the Court of Examiners.

A letter was read from the Assistant Secretary of the Joint Committee for National Health Insurance, stating that the National Health Insurance Joint Committee and the Insurance Commissions for England, Scotland, and Wales respectively proposed to hold a conference on Feb. 2nd with representatives of the medical profession and inviting the College to appoint two members to attend the conference. It was resolved that the following reply should be sent to the National Health Insurance Commissioners:—

> The Council regret that they are not prepared to send representatives to the meeting suggested by the National Health Insurance Commissioners. The Council are of opinion that the administration of the medical benefits cannot be carried out under the Act with due regard to the interests of the public and the welfare of the medical profession, and that no satisfactory arrangement can be arrived at without an amending Act. The Council, however, will be prepared to render any assistance in their power in the drafting of an amending Act for the provision of such amendments as are necessary to secure the cooperation of the medical profession.

The Standing Committee of the Council on the National Insurance Act were instructed to take steps to communicate with other medical corporations with a view to united action with regard to the Insurance Act.

A report was presented from the Dental Education Committee, containing a statement upon dental education in London which had been prepared in response to a request from the Royal Commission on University Education in London. This was approved, and the President and Sir Alfred Pearce Gould were nominated as witnesses to represent the College before the Commission and to give any further information on the subject that might be required.

Mr. C. H. Golding-Bird was re-elected as the representative of the College on the Central Midwives Board for the year from March 31st next.

The PRESIDENT reported that he had chosen Mr. C. W. Mansell Moullin as Bradshaw lecturer for the ensuing collegiate year.

The SECRETARY pointed out that in the report of the General Medical Council on the final examinations of the dental licensing bodies the proportion of marks which candidates at the examinations for the licence of the College must obtain in order to pass was given as two-fifths, whereas three-fifths is the proportion required, and that steps had been taken to correct the error.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 94 largest English towns having an estimated population of 17,559,219 persons in the middle of this year, 8300 births and 6278 deaths were registered during the week ending Feb. 3rd. The annual rate of mortality in these towns, which had been 15·4, 14·8, and 16·5 per 1000 in the three preceding weeks, further rose to 18·6 per 1000 in the week under review. During the first five weeks of the current quarter the mean annual death-rate in these large towns averaged 16·1 per 1000, while in London during the same period the average annual death-rate did not exceed 15·5 per 1000. The annual death-rates in the several towns last week ranged from 6·9 in Ilford, 9·0 in Enfield, 9·7 in Bath, 10·1 in Great Yarmouth, and 10·4 in Ealing, to 27·4 in Dudley, 28·1 in Barnsley, 30·9 in Bury, 31·0 in Preston, and 31·4 in Walsall.

The 6278 deaths from all causes in the 94 towns were 719 in excess of the number in the previous week, and included 401 which were referred to the principal epidemic diseases, against 297 and 311 in the two preceding weeks. These 401

deaths from the principal epidemic diseases included 166 from whooping-cough, 71 from diphtheria, 67 from infantile diarrhœal diseases, 63 from measles, 21 from scarlet fever, and 13 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases last week was equal to 1·2 per 1000, or 0·3 above the average in the four preceding weeks. The deaths attributed to whooping-cough, which had been 88, 81, and 94 in the three preceding weeks, further rose to 166 last week, and caused the highest annual death-rates of 1·6 in Leicester and in Barrow-in-Furness, 1·7 in Rhondda, 1·8 in Swansea, 2·6 in Bury, 2·9 in Gillingham, 3·0 in Barnsley, 3·8 in Merthyr Tydfil, and 7·3 in Walsall. The deaths referred to diphtheria, which had declined from 69 to 53 in the three preceding weeks, rose to 71 last week, and included 19 in London and its 14 suburban districts, 5 in Liverpool, 4 in Bolton, 3 in Preston, and 3 in Leeds. The fatal cases of infantile diarrhœa, which had declined from 58 to 47 in the three preceding weeks, rose to 67 last week, and of this number 25 were registered in London, 5 in Liverpool, 4 in Birmingham, 4 in Manchester, 3 in Stoke-on-Trent, and 3 in Salford. The deaths attributed to measles, which had been 69, 64, and 72 in the three previous weeks, declined to 63 last week; the highest annual death-rates from this disease were 1·4 in Oldham, 1·8 in Reading, 2·1 in Warrington, and 2·5 in York. The 21 fatal cases of scarlet fever last week were equal to the average in the four preceding weeks, and included 2 in each of the following towns: Coventry, Liverpool, Salford, Barnsley, and Newcastle-on-Tyne. The deaths referred to enteric fever, which had been 20, 17, and 19 in the three preceding weeks, declined last week to 13, of which 4 were registered in Manchester and 2 in London.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had steadily decreased from 2213 to 1562 in the 11 preceding weeks, had further declined to 1500 on Saturday last; 169 new cases of this disease were admitted to these institutions during the week, against 165, 162, and 158 in the three preceding weeks. These hospitals also contained on Saturday last 1199 cases of diphtheria, 340 of whooping-cough, 123 of measles, 49 of enteric fever, and 2 of small-pox. The 1538 deaths from all causes recorded in London were 162 in excess of the number in the previous week, and were equal to an annual death-rate of 17·7 per 1000. The deaths referred to diseases of the respiratory system, which had increased from 290 to 333 in the three preceding weeks, further rose to 394 in the week under notice, and were 29 in excess of the number registered in the corresponding week of last year.

Of the 6278 deaths in the 94 large towns last week, 186 were referred to different forms of violence, and 452 were the subject of coroners' inquests. The causes of 62, or 1·0 per cent., of the deaths registered in the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Nottingham, and in 57 other smaller towns. The 62 uncertified causes of death last week included 13 in Birmingham, 7 in Liverpool, 3 in London, and 3 in Warrington.

HEALTH OF SCOTCH TOWNS.

In the 18 largest Scotch towns having an estimated population of 2,182,400 persons in the middle of this year, 1069 births and 797 deaths were registered during the week ending Feb. 3rd. The annual rate of mortality in these towns, which had been 17·3 and 17·7 per 1000 in the two preceding weeks, further rose to 19·1 per 1000 in the week under notice. During the first five weeks of the current quarter the mean annual rate of mortality in these Scotch towns averaged 17·9 per 1000, and was 1·8 per 1000 above the mean rate recorded in the 94 large English towns during the same period. The annual death-rates in the several Scotch towns last week ranged from 7·5 in Motherwell, 9·0 in Clydebank, and 11·0 in Leith, to 22·7 in Dundee and in Greenock, and 23·3 in Ayr.

The 797 deaths from all causes were 57 in excess of the number in the previous week, and included 100 which were referred to the principal epidemic diseases, against 103 and 89 in the two preceding weeks. Of these 100 deaths, 55 resulted from measles, 14 from whooping-cough, 13 from infantile diarrhœal diseases, 12 from diphtheria, 5 from scarlet fever, and 1 from typhus fever, but not one from enteric fever or from small-pox. These 100 deaths from the principal epidemic diseases were equal to an annual death-rate of 2·4 per 1000, or 1·2 per 1000 above that recorded in the 94 large English towns. The deaths attributed to measles, which had been 41, 56, and 39 in the three preceding weeks, rose to 55 last week, of which number 43 were recorded in Glasgow, 4 in Greenock, 2 in Edinburgh, and 2 in Aberdeen. The deaths resulting from whooping-cough, which had been 18 in each of the two preceding weeks, declined last week to 14; 3 deaths were registered in Glasgow, 3 in Aberdeen, 2 in Greenock, and 2 in Kirkcaldy. The deaths of infants referred to diarrhœal diseases, which had been 9 and 11 in the two preceding weeks, and comprised 8 in Glasgow, 3 in Dundee, and 2 in Leith. The 12 fatal cases of diphtheria were equal to the average in the four preceding weeks, and included 4 in Glasgow and 4 in Edinburgh. The 5 deaths referred to scarlet fever were equal to the average in the two preceding weeks, and included 2 deaths in Glasgow. The fatal case of typhus occurred at Motherwell.

The deaths referred to diseases of the respiratory system, which had been 120 and 133 in the two preceding weeks, further rose to 144 in the week under notice; and 31 deaths resulted from different forms of violence.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,157,014 persons in the middle of this year, 653 births and 545 deaths were registered during the week ending Feb. 3rd. The annual rate of mortality in these towns, which had increased from 18·0 to 22·3 per 1000 in the five preceding weeks, further rose to 24·6 per 1000 in the week under notice. During the first five weeks of the current quarter the mean annual death-rate in the 22 Irish towns averaged 21·5 per 1000; in the 94 large English towns the mean annual death-rate during the same period did not exceed 16·1, while in the 18 Scotch towns it was equal to 17·9 per 1000. The annual death-rates in the several Irish towns were equal to 22·4 in Dublin (against 17·7 in London), 31·1 in Belfast, 19·7 in Cork, 12·7 in Londonderry, 25·8 in Limerick, and 15·2 in Waterford; while in the 16 smallest of these Irish towns the death-rate last week was equal to 21·0 per 1000.

The 545 deaths from all causes in the 22 Irish towns were 50 in excess of the number in the previous week, and included 31 which were referred to the principal epidemic diseases, against 41 and 30 in the two preceding weeks; of these 31 deaths, 15 resulted from whooping-cough, 7 from diarrhœal diseases, 3 from scarlet fever, 3 from diphtheria, 2 from measles, and 1 from enteric fever, but not one from small-pox. These 31 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·4 per 1000; the death-rate from these diseases did not exceed 1·2 in the large English towns, while in the Scotch towns it was equal to 2·4 per 1000. The deaths attributed to whooping-cough, which had been 19 and 15 in the two preceding weeks, were again 15 last week, and included 14 in Belfast and 1 in Dublin. The deaths referred to diarrhœal diseases, which had been 11 and 5 in the two preceding weeks, were 7 last week, all but one of which related to infants under two years of age; 3 deaths occurred in Dublin and 3 in Belfast. The 3 fatal cases of scarlet fever, 2 of which were recorded in Dublin, were equal to the average in the four preceding weeks. The deaths referred to diphtheria, which had been three in each of the three preceding weeks, were again 3 last week, and included 2 in Dublin. The 2 fatal cases of measles and that of enteric fever were all registered in Dublin.

The deaths referred to diseases of the respiratory system, which had steadily increased from 83 to 152 in the six preceding weeks, further rose to 184 last week. Of the 545 deaths from all causes in the 22 Irish towns, 145, or 27 per cent., occurred in public institutions, and 10 resulted from different forms of violence. The causes of 16, or 2·9 per cent., of the total deaths in the week under notice were not certified either by a registered medical practitioner or by a coroner after inquest; in the 94 English towns the proportion of uncertified causes of death last week did not exceed 1·0 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

IN accordance with the provisions of Order in Council of April 1st, 1881, Surgeon-General Christopher Pearson has been placed on the Retired List at his own request (dated Feb. 2nd, 1912).

The following appointment has been notified:—Staff-Surgeon: A. R. Thomas to the *Excellent*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant James R. Hill is transferred to the Reserve of Officers under the provisions of Article 632, Royal Warrant for Pay and Promotion, 1909 (dated Jan. 30th, 1912).

Surgeon-General A. T. Sloggett, C.B., C.M.G., Principal Medical Officer, His Majesty's Forces in India, has been appointed Honorary Surgeon to the King. Surgeon-General J. G. MacNeece, C.B., has been appointed Principal Medical Officer of the Sixth (Poona) Division. Surgeon-General T. M. Corker has taken up duty as Principal Medical Officer of the Eighth (Lucknow) Division. Colonel W. W. Pike, D.S.O., has taken up duty as Principal Medical Officer of the Bombay Brigade.

Lieutenant-Colonel R. Kirkpatrick has joined at Cairo. Lieutenant-Colonel J. S. Green has been appointed to command the Station Hospital at Bangalore. Lieutenant-Colonel R. W. Wright has been posted to Fyzabad in charge of the Station Hospital. Lieutenant-Colonel T. McCulloch has taken over charge of the Medical Division at the Royal Victoria Hospital, Netley. Lieutenant-Colonel C. R. Elliott has been transferred from Lahore to Jhansi and appointed to command the Station Hospital. Lieutenant-Colonel B. M. Skinner, M.V.O., has been detailed as Senior Medical Officer in charge of the transport ss. *Rewa*, leaving Karachi for Southampton on Feb. 14th. Lieutenant-Colonel L. T. M. Nash will take charge of the Military Hospital, Hounslow.

Major F. G. Richards has been ordered to join in Ireland on March 10th and will be posted to the Cork District. Major T. H. J. C. Goodwin, D.S.O., has taken up duty at Devonport. Major W. H. S. Nickerson, V.C., has been transferred from Cherat to the Station Hospital at Peshawar. Major F. J. C. Heffernan has been posted to the Fifth (Mhow) Division. Major G. S. Crawford has joined for duty in the Dublin District. Major L. P. Moore has embarked for a tour of duty in India. Major W. P. Gwynn has taken up duty at Karachi. Major E. W. Slayter has been transferred from Bellary to Mount Abu and appointed to command the Station Hospital. Major St. J. B. Killery has been appointed to the Northern Command. Major J. M. Sloan, D.S.O., has taken up duty in India. Major G. St. C. Thom has been transferred from Murree to the Station Hospital at Rawal Pindi. Major R. H. Lloyd has embarked for a tour of service in India. Major R. J. Blackham has taken up duty at Peshawar. Major D. Harvey has joined for special duty with the Sleeping Sickness Commission in Nyasaland. Major E. P. Connolly has embarked for a tour of service in India.

Captain E. T. Potts has been posted to Ireland for duty in the Dublin District. Captain N. Low has been selected for attachment to the Belfast University Contingent of the Senior Division, Officers Training Corps. Captain H. C. Winckworth has been selected for appointment as Specialist in Advanced Operative Surgery to the Royal Herbert Hospital at Woolwich, in succession to Captain A. J. Williamson, who has embarked for a tour of service in the Straits Settlements. Captain G. W. W. Ware has been posted to the Southern Command. Captain R. L. V. Foster, from Devonport, has taken up duty at the Military Hospital, Crown Hill. Captain E. M. Pennefather has been transferred from Fermoy to Fethard. Captain C. E. L. Harding has taken up duty at the Station Hospital, Quetta. Captain H. H. A. Emerson has been transferred from Limerick to Derby and appointed Adjutant at the Royal Army Medical Corps School of Instruction of the North Midland Division. Captain M. C. Wetherell has joined for duty at Kildare. Captain J. C. L. Hingston has been appointed to the Station Hospital at Wellington. The following Captains have been posted to the Irish Command: E. W. Powell, O. Ievers, C. E. W. S. Fawcett, V. H. Symons, and M. J. Cromie.

INDIAN MEDICAL SERVICE.

Colonel C. F. Willis, C.B., has taken over duty as Principal Medical Officer of the Ninth (Secunderabad) Division of the Southern Army in India. Colonel R. W. S. Lyons has arrived home on leave of absence from India. Lieutenant-Colonel C. F. Fearnside has been selected for appointment as Superintendent of the Central Jail at Rajahmundry. Lieutenant-Colonel R. Bird, C.I.E., has taken up duty as Professor of Surgery at the Medical College, Calcutta, and Surgeon to the Medical College Hospital, vice Major E. Owen Thurston.

Major C. C. Murison has been appointed Superintendent of the Lunatic Hospital at Matheran, in succession to Major E. F. G. Tucker. The services of Major V. H. Roberts have been placed temporarily at the disposal of the Chief Commissioner of the Central Provinces. Major F. H. Watling has been selected to officiate as Superintendent of the Central Jail at Buxar during the leave of absence of Captain W. Gillitt.

The services of Captain N. H. Hume have been placed at the disposal of the Government of Eastern Bengal and Assam while that officer officiates as Civil Surgeon of Jalpaiguri. Captain K. S. Singh has been appointed Plague Medical Officer at Karnal. The services of Captain J. G. G. Swan have been placed permanently at the disposal of the Punjab Government. Captain A. W. C. Young has taken up duty as Specialist in the Prevention of Disease at Bannu, and has been appointed in charge of the Bacteriological Research Laboratory at Brigade Headquarters. Captain E. H. B. Stanley has arrived home on leave of absence from India. Captain P. Heffernan has been appointed Lecturer on Mental Diseases at the Medical College, Madras, and Superintendent of the Madras Lunatic Asylum. Captain W. W. Jeudwine, medical officer of the 27th Punjabis at Alipore, has been appointed to Rawal Pindi as Plague Medical Officer. Captain D. M. C. Church has been granted leave of absence home for one year from India. Captain W. D. H. Stevenson has been appointed to the Bacteriological Department under the Sanitary Commissioner with the Government of India. Captain R. T. Wells, officiating civil surgeon at Dera Ghazi Khan, has been appointed Plague Medical Officer at Rotak, vice Captain S. B. Mehta, whose services have been placed at the disposal of the Government of India for employment in the Department of Education. Captain S. H. Lee Abbott, civil surgeon at Dalhousie, has been transferred to hold Civil Medical Charge at Ferozepore. Captain H. B. Steen, officiating first resident surgeon in the Presidency General Hospital, Calcutta, has been appointed to act as Surgeon-Superintendent of the hospital during the absence on privilege leave of Lieutenant-Colonel H. W. Pilgrim. Captain K. G. Ghorpurey has been appointed to officiate as Second-class Civil Surgeon at Aden during the absence on leave of Lieutenant-Colonel S. E. Prall.

Lieutenant G. G. James has been selected for appointment as Assistant to the Chief Quarantine Medical Officer in the Persian Gulf. Lieutenant A. L. Sheppard has been appointed to officiate as Officer in Medical Charge of the 122nd Rajputana Infantry. Lieutenant E. S. Goss has been placed under orders to embark for India. Lieutenant H. Stott has been appointed Specialist in Midwifery and Diseases of Women and Children, Burma Division.

ARMY HEADQUARTER STAFF IN INDIA.

The following appointments have been made:—Surgeon-General A. T. Sloggett, C.B., C.M.G., Army Medical Service, vice Surgeon-General Sir W. F. Trevor, K.C.S.I., C.B., M.B., Army Medical Service, to be Principal Medical Officer, His Majesty's Forces in India (dated Dec. 31st, 1911). Colonel H. Hendley, Indian Medical Service, vice Colonel D. ffrench-Mullen, Indian Medical Service, to be Deputy Principal Medical Officer, His Majesty's Forces in India (dated August 8th, 1911).

TERRITORIAL FORCE.

Royal Army Medical Corps.

Yorkshire Mounted Brigade Field Ambulance, Royal Army Medical Corps: Percy Kingsley Steele to be Lieutenant (dated Oct. 6th, 1911).

4th Northern General Hospital, Royal Army Medical Corps: Charles John Coleman to be Captain (dated Dec. 15th, 1911).

DEATHS IN THE SERVICES.

Brigade-Surgeon Henry Elmsley Busteed, C.I.E., late I.M.S., in his seventy-ninth year. He received a commission in the service of the East India Company in 1855 and was a medical officer with the Horse Artillery in the mutiny of 1857-58. For his services at Cawnpore and Lucknow he received the medal with clasp. In 1865 he was appointed

assistant assay master of the Madras Mint, and was subsequently appointed to the Bombay Mint in a similar capacity. In 1872 he was appointed assay master at Calcutta and retired in 1886, in which year he received the decoration of C.I.E. While at Calcutta he collected the materials for "Echoes of Calcutta," a well-known standard work on the history of Calcutta.

Sir J. Porter, Director-General of the Medical Department of the Navy, inspected the medical establishment of Plymouth Naval Station on Jan. 31st.

Fleet-Surgeon Robert Hill, M.V.O., of the *Medina*, has on the return of the King and Queen from India been advanced to C.V.O.

Correspondence.

"Audi alteram partem."

GUARDIANS AND DISSECTION.

To the Editor of THE LANCET.

SIR,—The report of the meeting of the Southwark board of guardians which you publish has greatly interested me. My letter to the chairman seems to have been fairly quoted, and I have nothing to withdraw or excuse in it. The point is that we cannot treat the human body without knowing its structure, and we cannot learn its structure without examining the dead. Put in another way, we cannot learn to operate for the prolongation of life and the relief of suffering without practising on the dead, unless we are to practise on the living. I view the action of the important board of Southwark guardians with the greatest apprehension, since it is sure to be followed, as Mr. Hills hopes it will, by other boards. It now becomes our duty to decide whether we shall continue to keep in the background and watch our supply diminishing year by year, as it is doing, or whether we should not rather ask every thinking man to consider whether it is right to sacrifice lives and relief from suffering to a kindly sentimentalism.

Is the benefit gained by allowing unclaimed dead bodies to decompose naturally instead of being permanently embalmed and reverently dissected before being buried with due religious rites enough to set against the loss of the surgeon's skill when an instant operation is necessary in order to save some valuable life? I submit that we have no moral right to allow a single breadwinner to die or a single child to suffer unrelieved even if the alternative is the examination after death of every man who dies in the kingdom, be he duke, anatomist, Poor-law guardian, or pauper.

I can already feel that, while we are trying to educate those who have the charge of the poor in these elementary facts of medical knowledge, anatomists will have a very bad time of it, but we must face all that and hope for the help of those who are alive to the great responsibility which a guardianship of the poor entails. I have said nothing about the scientific side of the question. Of course we want to know not only where all the parts of the body are, but why they are as they are. It is quite arguable that a sentimental objection to dissection might be fairly set against this, but I have never yet heard any attempt to justify a refusal to allow the surgeon, who willingly gives his best skill to the poor in their need, to use the only means on earth to gain that skill.

I am, Sir, yours faithfully,

F. G. PARSONS, F.R.C.S. Eng.,
Lecturer on Anatomy at St. Thomas's Hospital and at the School of Medicine for Women.

St. Thomas's Hospital Medical School, S.E., Feb. 2nd, 1912.

*** The paragraph to which Mr. Parsons refers will be found on p. 408 of this issue of THE LANCET. We drew Mr. Parsons's attention to it.—ED. L.

THE EXTRACTION OF CATARACT.

To the Editor of THE LANCET.

SIR,—In THE LANCET of July 29th, 1911, appears an article by Mr. H. L. Eason on the Extraction of Cataract. What directly concerns me in that article I here explain. On the basis of the rest of his article I hope to contribute matter of interest to the profession at a later date.

In Mr. Eason's article he, like a number of others in the British medical press, reviews 23 cataract operations performed by me in February, 1909, in Major Kilkelly's hospital, Bombay, as published in the *Indian Medical Gazette*, May, 1910, as if I had never questioned those results. By some peculiar accident ophthalmic writers in the British medical press seem only to have read the above-quoted number of the *Indian Medical Gazette* and the number of the *Ophthalmic Record* in which the same paper by Major Kilkelly appeared, and seem not to have read the remainder of the controversy in both journals. In fairness to your readers I ask you to publish the following *résumé* of that controversy. (The whole of the controversy can be seen in full by anyone who consults the *Indian Medical Gazettes* of 1910 and 1911, or the April number of the *Ophthalmic Record* of Chicago, 1911).

While at the Bombay Medical Congress in February, 1909, at the urgent request of Major P. P. Kilkelly, I.M.S., I performed 23 intracapsular extractions in his hospital and left by the next train. At the time of operation I entered the details of the operation on the bed-head tickets of these patients. I heard no more of the cases until I saw them reported by Major Kilkelly in the May number of the *Indian Medical Gazette* of 1910. My permission was not asked before the publication of these cases, nor was any information given me concerning them before the publication of the results. I was not invited down to Bombay to see and report on them myself. About the same time Dr. Pontius published notes of these same cases in *North-West Medicine*, U.S.A. In a succeeding number of the *Indian Medical Gazette* as a part of this controversy Major Kilkelly reported one side of a purely private case of mine done at Amritsar, Punjab, without consulting me and reported it incorrectly. The case was a failure, and he reported it as of "general interest," implying that it was in harmony with the Bombay cases—that such was the usual result of my cases, and that I knew nothing of the after-result of my cases. However, I was able to publish the whole of the case, putting a very different construction on the result. Dr. Pontius, with Major Kilkelly's permission (not having asked mine), examined the famous Bombay cases. When I put Dr. Pontius's facts as regards gross lesions alongside with Major Kilkelly's facts as regards the same lesions they very much disagreed in nearly every detail, even to the number of cases purporting to be mine (Dr. Pontius reported on 24 cases; I had operated on 23). I asked Major Kilkelly for the loan of the bed-head tickets to see my own entries on them, as both these surgeons had recorded more capsules left behind than were entered on the bed-head tickets. He declined to lend them to me, stating that he did not see "what useful purpose it would serve."

The results in themselves were utterly unintelligible to me, and when I put the facts of Dr. Pontius and of Major Kilkelly alongside of one another the only conclusion I could draw from the discrepancies was that these two surgeons could not have examined the same cases, but that the failures of Major Kilkelly's hospital had been paraded for him and for Dr. Pontius and been put to my charge. This charge I made in the controversy and no attempt has been made to meet it, and no attempt can be made to meet it while Major Kilkelly's facts and Dr. Pontius's facts stand. I consequently cannot understand how any fair-minded man can quote the results published by Major Kilkelly as having any bearing on intracapsular extraction.

I am, Sir, yours faithfully,

HENRY SMITH, M.D., M.Ch.,
Lieutenant-Colonel, I.M.S.

Amritsar, Jan. 15th, 1912.

THE COMBINED WHOLE-TIME MEDICAL OFFICER.

To the Editor of THE LANCET.

SIR,—Recently the *Western Daily Mercury* reported the proceedings of a joint meeting of the St. Austell board of guardians and the rural district council to consider the appointment of a medical gentleman to carry out the combined duties of medical officer of health, medical officer to the union workhouse, and also No. 7 District. A suggestion was also made that the office of public vaccinator should be included as well. After a discussion the matter was adjourned for a month, a committee being appointed to discuss the various sugges ted schemes.

It is proposed to pay a salary of £400 per annum to a medical gentleman, who presumably will have to devote the

whole of his time to his "official duties." The combined appointments are as follows: Medical officer to the union workhouse, £35; medical officer to the union district No. 7, £30; probable fees, £10; medical officer to the union cottage homes, £5; medical officer to the rural district, £270; and medical officer to the urban district, £70. We hear on good authority that the expense of conveyance, drugs, &c., will fall on the holder of this appointment.

The local medical men have protested against the injustice of including in the office of medical officer of health the duties which are performed by other medical men resident in the district, and were supported by at least two of the members who saw the danger of some of the work being neglected. Our main purpose, however, in writing this letter is to point out to the profession the grave danger they would be placed in by the creation of a medical bureaucracy, especially an inadequately paid one. These officials will be under the control, either directly or indirectly, of the Government. A sufficient number of them will in time become a sort of Government medical reserve to be employed under the Insurance and other Acts on terms which the more independent practitioner would refuse, a position which we trust no medical man will accept.

The case illustrates the points which were urged by many speakers at the Joint Medical Officers Associations' dinner, and shows the urgent necessity of all medical men who hold official appointments joining their respective associations, so that some joint action may be authoritatively taken in view of the increasing number of local bodies who are seeking to make these ominous appointments on the spurious ground of so-called economy.—We are, Sir, yours faithfully,

RASHELL DAVISON,
Chairman of Council, Association of Medical Officers of Health.
D. A. BELILIOS,
Honorary Secretary, Association of Medical Officers of Health.
New Malden, Feb. 6th, 1912.

KING EDWARD'S HOSPITAL FUND AND THE EVELINA HOSPITAL.

To the Editor of THE LANCET.

SIR,—I am gratified to notice that in THE LANCET of Jan. 27th (p. 242) you have been good enough to call attention to the difference of opinion between the King's Fund and the authorities of this hospital, and take this opportunity of thanking you for so doing.

Your article is, however, not quite accurate in one respect, and I shall be extremely obliged if, in justice to my committee, you will point out that, although the King's Fund insisted on an inquiry officer being appointed, their distribution committee have given absolutely nothing to meet the outlay incurred by having that official and establishing her department on a proper basis, the total cost of which, as stated in my letter to the *Times*, is over £200 a year.

My committee feel that the King's Fund have acted with some want of consideration for the hospital throughout the whole of this business, as the grant of £150 made at the end of 1910 was the amount usually allotted to this institution before the appointment of an inquiry officer was required. When my committee complied with the request that an inquiry officer be appointed, it was quite expected that the King's Fund would meet certainly a considerable proportion of the cost, in addition to the usual grant.

I am, Sir, yours faithfully,
D. MALCOLM SCOTT,
Jan. 31st, 1912. Chairman of the Committee of Management.

THE ACETONE-WRIGHT METHOD OF LEUCOCYTE COUNTING.

To the Editor of THE LANCET.

SIR,—Not long ago I sent to THE LANCET[1] an account of a method of absolute and differential white cell counting in one operation. Further experience of this method enables me to add the following remarks.

1. It is better to use a 1 c.c. pipette graduated in 1/100ths for measuring the various constituents instead of a graduated cylindrical vessel. With a pipette the proportions of acetone and water should be 2 to 13 instead of 3 to 12. I attribute this difference to the different shapes of water and acetone surfaces in narrow cylinders.

2. For convenience the acetone and water may be kept as a stock solution of 13 per cent. acetone to which 20–25 per cent. of Wright's stain (diluted four-fifths with methyl alcohol) is added just before use. The optimum quantity varies with the blood, the dilution, and the time elapsing before counting it. The results seem to be not quite so good as those given by freshly prepared solutions.

3. Much the best, simplest, and cheapest method is to mix the Wright's stain and acetone in a stock solution. The mixture is made thus. Grind up one soloid of Wright's stain in a glass mortar with successive quantities of methyl alcohol; pour each quantity into a glass measure, allowing a little while for sedimentation in the mortar. When 10 c.c. are in the measure again allow a little while for sedimentation, and then pour it into a tall, narrow, one-ounce bottle and cork it well. Then treat the residue in the mortar in exactly the same way with acetone till 10 c.c. are made up. Add this to the stain in the bottle, and then add direct 5 c.c. of methyl alcohol. There should be no precipitate, and this apparently keeps indefinitely if well corked.

This preparation may be used both for counting with a hæmocytometer and for staining films. With the hæmocytometer it is used as follows: Measure 0·3 c.c. of distilled water and 0·1 c.c. of this mixture into a small cylindrical vessel of such a size as to let a 1 in 10 pipette reach to the bottom. Cork at once and shake well. Using a 1 in 10 pipette, dilute the blood 1 in 10 or 1 in 20. Draw up the fluid quickly till the bulb is nearly full, then hold pipette and cylinder horizontally and fill to the mark. Thus it is possible to make an absolutely exact dilution quite easily. Still holding the pipette horizontal, remove the cylinder, and cover first the point and then the other end of the pipette with thumb and finger and shake thoroughly, still holding it horizontal. The cover-glass should be put on the drop as quickly as possible. The method has, of course, all the disadvantages of the 1 in 10 pipette methods, but if the rules be adhered to, to base an absolute count on not less than 100 cells and a differential on 300 cells, absolute accuracy, as checked by films and Toisson's method, may be obtained in one-tenth of the time. If the cover-glass is put on smartly the distribution of the cells is quite even, but it is perhaps safer to visit equally all quadrants of the disc. I usually follow along the square which is contained by the disc in making a differential count, and count three of the large squares in a Thoma-Zappert slide for the absolute count. For rough estimation the small-squared area in two drops will give approximate results, both absolute and differential. In ordinary blood this area in each drop will contain 40 cells if 1 in 20 dilution is used. (The quantity of stain suggested is usually enough to fill a 1 in 10 counter and leave a little. For a 1 in 100 counter 0·8 to 1·0 c.c. must be made up.)

This "Peking modification" stains films quickly and well, but the usual method must be altered. Cover the film with stain for 20 or 30 seconds, then add an equal quantity of distilled water and mix well. Leave this for one minute, then pour it off, but *do not wash it off*. Dry the film over a flame, and then wash in distilled water; one dash of water from a test-tube is enough. The stain is very clear, the blue is a royal blue. The process takes two to two and a half minutes only and is very economical. Since acetone is added it seems unnecessary to use the very costly acetone-free methyl alcohol, but ordinary methyl alcohol may, perhaps, contain other undesirable impurities. I have no experience of this, nor do I know whether the malarial parasite can be stained in this way, but I see no reason to doubt it.

The further problem of combining red, white, and differential counts in one operation has been solved by Schüffner.[2] His formulæ as reported in the *Medical Officer Supplement* are:—Solution A: Sodium chloride, 4 grammes; phenol, 3 grammes; borax, 0·1 gramme; formalin, 1 c.c.; and distilled water to 1 litre. Solution B: Methylene blue, 1 gramme; potass. hydrate, 0·1 gramme; and distilled water to 100 c.c. For use add two drops of B to 10 c.c. of A.

It is certainly possible with this stain to make an absolutely accurate white and differential count 12 minutes after taking the blood; the staining does not show clearly sooner.

[1] THE LANCET, Jan. 6th, 1912, p. 20.

[2] Münchener Medizinische Wochenschrift, 1911, p. 1495.

The eosinophils are quite easy to recognise, and the rest are well stained. But whether it be a peculiarity of Peking blood or a misprint in the report, I have found the solution made up as above distinctly hypotonic, and the red cells have been destroyed to the extent of 5 to 20 per cent. in ten minutes. To avoid this I have added 0·5 gramme of sodium chloride, and get satisfactory red cell counts, but the polymorphonuclears do not stain so clearly; the stain of some becomes diffuse and others lose it altogether in 30 minutes. This laking may be a local peculiarity, for the blood of both natives and foreigners here has special features, but it is worth mentioning as there may be no other indication than a gradual reduction in the count in successive drops or an occasional "cell ghost" with the hæmoglobin in a corner. If either of these things occur, in all probability at least 10 per cent. of cells have been already destroyed. Therefore, although this method is exceedingly handy and quick when a general idea of the blood is required, I would strongly advise that anyone who uses it should compare his results with those obtained by Toisson's fluid several times before trusting to it altogether. Even with the extra sodium chloride a little laking begins to occur after an hour or so, but for immediate use the results are quite trustworthy. I am, Sir, yours faithfully,

R. A. P. HILL.

Union Medical College, Peking, China, Dec. 12th, 1911.

THE PRACTICE OF MEDICINE IN BRITISH COLUMBIA.

To the Editor of THE LANCET.

SIR,—Dr. G. Gibson, in THE LANCET of Dec. 16th, 1911, sounds a timely note of warning as regards the conditions necessary for practice in British Columbia. Medical men in the old country are being tempted to buy fruit farms in the province, and it is important that they should know that their British qualifications do not entitle them to practise out here. The examination, moreover, which they have to pass before being allowed to register is not a mere formality. Even a well-informed practitioner, unless he had done a few months' reading before the examination, might find that he had failed to satisfy the examiners. For the examination is a very comprehensive one, and includes many subjects which we are apt to put aside after our student days are over.

As regards the chances of practice, they are not as good as might be imagined. It is true British Columbia is a highly prosperous country with a great future ahead of it. But it is as yet but thinly populated outside of the towns. All openings there may be are rapidly filled by medical graduates from the Canadian schools. At present there are nearly 600 names on the Medical Register, and most of these men are in active practice. The population of the province, on the other hand, barely amounts to 400,000 (386,000 according to the last census taken in May, 1911). In the city of Vancouver, with a population of 130,000, there are over 150 registered practitioners. The number of medical men out here is greater *per capita* than it is in England. It should, however, be stated that there is little or no poverty, and there are few who cannot afford to pay for medical attendance.

Dr. Gibson is, I am afraid, a little generous when he puts down $1500 (£300) as what a new-comer might reasonably expect to make during his first year in Vancouver. This, moreover, only states one side of the question. Living out here, it should be mentioned, is from 75 to 100 per cent. higher than in England. It is also the custom here for medical men to have an office in the business section where rent is necessarily very high. If a man is married, and unless his wife is prepared to do all the household work, he will find the cost of servants a very heavy item. A general servant costs from £5 to £7 per month, while it is difficult to obtain a cook (usually Chinese) at less than £10 a month. As regards special work, such as eye, ear, throat, and nose, the field is fully occupied, there being at least a dozen men engaged in these specialties.

British Columbia offers, as Dr. Gibson says, better chances, especially to the younger men, than does the old country. But, as he wisely remarks, it is a serious mistake to think that all one has to do is "to stick up one's brass plate and the patients will come pouring in." It would not be wise for anyone who intends starting in one of the coast cities (Vancouver and Victoria) to have less than a capital of £200 after arrival here. He will find that he requires that amount and more to defray preliminary expenses as well as cost of living during the time that must necessarily elapse before he will get both ends to meet from the proceeds of his practice.

I am, Sir, yours faithfully,

F. L. DE VERTEUIL, M.D. Edin., M.R.C.S. Eng.,
Surgeon R.N. (retired).

Vancouver, Jan. 3rd, 1912.

PSYCHOTHERAPY AND GENERAL MEDICINE.

To the Editor of THE LANCET.

SIR,—May I have space for a few remarks suggested by Dr. Branson's letter in to-day's LANCET? I have had some considerable experience of the practice of hypnotic suggestion, and hope that this will be a sufficient excuse. 1. In Dr. Branson's method he attempts to influence the patient's judgment, and in just the same way I try for the same result. I do not ask the patient to "surrender his judgment." As a matter of fact, the patient will often refuse a suggestion which is against his reason. The hypnosis only heightens his suggestibility and enables me to persuade him to use his own bodily powers on his own behalf. 2. The reasoning power of the patient in a state of hypnosis is not by any means entirely suspended. I have often argued with the patient about the cause of a symptom, and have brought him or her to reason with excellent results. 3. The patients who are amenable to hypnotic suggestion are not "those who are hovering between the neurologist and the alienist." These are the least amenable of any. Those whom Dr. Branson uses his "rational psychotherapy" upon are the best subjects for hypnotic suggestion. In fact, what Dr. Branson calls "rational psychotherapy" is really suggestion without the aid of hypnosis, its most valuable ally. I feel sure that if Dr. Branson could so far put aside his personal prejudice against hypnotic suggestion as to make a study of it he would very soon realise the truth of what I state and that his prejudice would rapidly disappear.

I am moved to make these remarks by the feeling that such a valuable weapon in our armoury as hypnotic suggestion should not be decried upon merely theoretical objections, which, practical experience shows, have no real basis. I am, Sir, yours faithfully,

Westcliff-on-Sea, Feb. 3rd, 1912. JAMES B. TOMBLESON.

THE ADMISSION OF VENEREAL CASES TO GENERAL HOSPITALS.

To the Editor of THE LANCET.

SIR,—I have read with much interest a letter with the above heading and signed "A Hospital Matron" which was inserted in THE LANCET of Jan. 27th. I have also read the paper on Venereal Disease, its Present and Future, in THE LANCET of Dec. 9th and 16th, 1911, written by Dr. Douglas White and Lieutenant-Colonel C. H. Melville, R.A.M.C., as well as the leading article, entitled "The Racial Importance of Venereal Diseases," in your columns of Dec. 16th. In this article you yourself recommend the procedure suggested by the above authors, and which is so obnoxious to "A Hospital Matron": that "in every hospital there should be accommodation for the treatment of venereal cases, both as in-patients and as out-patients."

The writer of the letter bases her objection to this measure on the disturbing effect it might have on the susceptibilities of "the ordinary well brought up girl of from 20 to 25, the usual age at which probationers enter hospitals," and who "is ignorant of the existence of venereal disease and of the horrible consequences of contracting it," and who, therefore, "certainly should not be exposed under compulsion and in ignorance to such a vile contagion." But this seems to me hardly a valid plea to urge against admitting venereal cases into general hospitals. To begin with, they *are* admitted into many general hospitals every month in the year, though not into "special wards," and though not always labelled as such; and therefore apparently no exception is taken to their presence in the wards. I need only quote from an annual volume of Hospital Reports

I have at hand that contains a list of all the medical and surgical cases admitted during the year into a large London hospital. It so happens that nearly 20 years ago that same hospital decided to close its male and female "lock ward" with 22 beds, and this was converted into a general surgical ward. I was sister of that ward afterwards for three years, and many "specific" cases came in for operation. In the reports I note gonorrhœa, 3 cases; gumma, 1 case; tabes dorsalis, 24 cases; syphilis, 17 cases, and there are probably others.

As regards infection, every woman who takes up nursing or midwifery knows—or *ought* to know—what risks she runs, while her exposure to infection only differs in degree but not in kind from that of the medical men and students who attend infective cases. The contact with certain forms of venereal disease constitutes a very serious risk to all who enter the medical or nursing professions. But women may become midwifery pupils at an age before they are admitted to some of the large general hospitals, and in district work they are exposed to far greater danger of infection from gonorrhœal discharges and from handling infants exhibiting the external manifestations of congenital syphilis than they are likely to be exposed to in the wards of a general hospital.

A high degree of "nerve" and of moral courage is required to make an efficient type of nurse, but she also needs to carry about with her Charity's mantle. "A Hospital Matron" says very truly that "no real nursing can exist where the patient's personality is treated as non-existent and the area of disease alone is considered." But surely this is an argument all the other way. The disease and its etiology may inspire the nurse with "horror and repulsion," but if, at the same time, it induces her to feel nothing but "disgust for its victims," I think she would be wiser in choosing some calling that makes no claim on her human sympathies. The "intolerance of youth" is not permitted to those who nurse the sick. All of us who have worked in general hospitals have had occasion to nurse "police cases." But a patient is a patient, and so long as his physical disabilities require our skilful ministrations his entire dependence on us must appeal to our nursing instincts, and we take little or no count of his moral obliquities. Incidentally, I have known this attitude to have a very humanising effect on the "sinner." And with regard to the sinner who comes to us for bodily tending I think we would do well to remember how it was once said: "Neither do I condemn thee."

I am, Sir, yours faithfully,

Hamburg, Feb. 4th, 1912. EMILIA V. KANTHACK DE VOSS.

M. BERGSON'S "CREATIVE EVOLUTION": THE NERVOUS SYSTEM IN ORGANIC EVOLUTION

To the Editor o THE LANCET.

SIR,—M. Henri Bergson's new theory of organic evolution, as brought out in his work, "L'Évolution Créatrice," a translation of which into English by Mr. Arthur Mitchell appeared a short time ago,[1] is bound to have a wide influence on thinking men, since in the chaotic state of biology as regards the factors of evolution, and the complete abstention of biologists from taking an intelligent interest in Lamarckism, especially as modified by recent science, it offers to the thinking man the most plausible theory for the operations at work in organic evolution.

The leading criticism of M. Bergson as to the existing theories of evolution is that there is no indication in any of them of any factor which would make for coördination. He cites as an instance as regards natural selection one of the strongest arguments against it—viz., that it is impossible to conceive that variations occur in nature in such correlation with each other as to lead to modification dependent on the simultaneous appearance of variations in different parts of the organism—e.g., in the brain and the peripheral parts correlated therewith in the eye. And one of his strongest arguments indicative of purpose in evolution is that special organs become developed on a similar plan in organisms that had diverged from the stem at a comparatively early period in evolution—e.g., the eye of molluscs and of vertebrates, and also in the case of the sexual apparatus of animals and plants, as illustrating unity of purpose. M. Bergson is, of course, a teleologist, but it seems to me he makes his working out of the plan to depend on subsequent conditions which arise as progress is made. Back of all is the creative energy, which works upward in a definite way and always with a definite aim. Such a theory, as I have stated, will, no doubt, gain wide acceptance, since it postulates an initial purposeful force through which evolution has been carried on, and by which coördination is effected. Theologians will doubtless hail it as being in harmony with, and really an explanation, if an expansion of their special creation views; and as such they will accept it as a new stronghold—in their attempt to harmonise dogmatic theology with science—especially since it seemingly is based on scientific grounds.

It will be idle for biologists to belittle it, to attempt to brush it aside by sarcasm or put it down by weight of authority; they will have to sink differences and retrace their steps in order to learn why, and how, such a theory as M. Bergson's has apparently so much truth in its favour. And in doing so they will have to go back to the teaching of Lamarck, whose theory—misunderstood in the past—in the present day, with the light of modern scientific knowledge, can be made to explain not alone the apparent truth in M. Bergson's theory, but once and for all, by demonstrating the true factors at work, lay bare the foundation on which the true process of organic evolution has been built. The absence in all theories of evolution of any factor which makes for coördination in development, as I have stated, is the characteristic feature revealed in M. Bergson's work. On the contrary, in Lamarckism this coördination and correlation is made clear. How is this shown? By demonstrating that through the nervous system such a coördination is effected. It is due to the fact that the influence of the nervous system in organic evolution has hitherto been ignored by biologists that it is possible for a theory such as M. Bergson's to be advanced and apparently rendered acceptable to thinkers. Let us see how the nervous system has been developed, and let us learn how its influence has been operative all through the progress of evolution.

The simplest organism consists of one cell. The functions of this cell are: (1) division or propagation, (2) absorption or nourishment, and (3) irritability or protection as seen in motion. When two or more cells are united to form one organism we find the same three functions; but even so low down in the scale of life as the hydra we find that certain cells are more sensitive than others and are known as *neuro-muscular* cells. "It is important," states Professor McFarland,[2] "to note that the purpose of the primitive nervous system seems to be to correlate external impressions with the movements directed towards the capture of food or escape from enemies." And in order to show that through the nervous system coördination is effected in evolution, in his chapter, "The Higher Organisms," he denotes the section on the development of the nervous system, *innervation and coördination*.

For the very lowest organisms there are certain conditions in the environment to which they react. These reactions are known as *tropisms*, and consist for the most part of reactions to heat, motion, and chemical action in a general way. As organisms rise higher the various reactions become specialised, and the special senses, foreshadowed at an early time, are gradually developed. As, however, the various diverging lines of advance seem to respond in a similar way, it would seem that following the adjustment of living protoplasm to the environment as regards light, heat, and other physical conditions, the need is the determining factor in all cases. Professor McFarland thus writes[3]: "The increasing structural complexity appears to be largely a matter of necessity"—i.e., for the satisfaction of the needs of the organism. To a physician the controlling and coördinating power of the nervous system must be clearly evident, since, as I have previously stated in your pages, he is capable of looking at the question from a standpoint of fuller knowledge than the pure biologist—a standpoint gained from a study of the organism from the unicellular, the beginning, to man, the final stage. In the gradual evolution through the nervous system we have a series of gradations somewhat different from the gradations

[1] THE LANCET, June 24th, 1911, p. 1710.

[2] Biology, General and Medical, p. 149.

[3] Ibid., p. 120.

assumed in natural selection, since each step forward is registered, as it were, by the nervous system, which controls and coördinates it, so that it is possible for each advance to be gradually transmitted as a higher and higher step is reached. And this is made possible since the need is a gradually increasing one, and is present in young and old and in both sexes, and is supplied through voluntary action. Hence each step is registered in the germ-plasm, or its developments, the germ, sperm, zygote, and embryo, and appears at birth as a variation.

In a review of M. Bergson's work, "Creative Evolution," in the columns of the *British Medical Journal*, the reviewer thus expresses himself as regards M. Bergson's theory in relation with that of Lamarck: "The resort to an internal principle of direction which M. Bergson considers indispensable appears to have suggested a return to the position of Lamarck, who somewhat naively attributed to the living being the faculty of modifying its organs by use or disuse, and of transmitting to its offspring the variations thus induced. But in the first place, this hypothesis leaves the variations of plants quite unexplained; in the second, the inheritance of acquired characters, if it ever occurs, must clearly be very exceptional. Moreover, granted its occurrence, the question at once arises, Was the new habit of purely somatic origin, or was it not based on an inborn tendency of germinal origin?" In this criticism of Lamarck the reviewer betrays a lamentable misapprehension of his theory. In the first place, Lamarck made a broad distinction between the modifying factors in plants and animals. As regards the former, he stated that the direct influences of the changing environment had a directly modifying influence, since plants become modified through their nutritive processes. That such is the case has been amply proved by Professor Henslow and many other eminent botanists, and again recently by Prince Krapotkin in the *Nineteenth Century and After*, his facts being drawn from the observations of experimenters in several different countries.

As regards animal life Lamarck *never* stated that animals have the power of modifying their organs directly through willing or desiring for such changes, leading to use or disuse of organs, as is maintained by biologists. What Lamarck did state was this: Owing to changes, climatic and otherwise, affecting their needs, animals, in order to sustain life, are forced to adopt new habits, to adopt new methods of satisfying their wants of food, &c. These new habits being forced through need on all the animals alike, and the new habits being voluntary in those with a nervous system, the results are registered on the germ-plasm and its developed stages, germ, sperm, zygote, and embryo. Hence the gradually acquired new habits, being permanent, and being forced on all, young and old, male and female, the organism is also gradually modified to suit the new conditions of life until full or relatively full adaptation is reached. Weismann, although at first basing his whole theory of evolution on the inviolability of the germ-plasm, was soon forced to recognise that no progress could be made thereby, since there could be nothing additionally acquired by which evolution could proceed; hence he was forced to admit the influence of the environment on the germ-plasm in order to account for adaptation. That is the position of Weismannism, on which Neo-Darwinism is based. But Lamarckians also recognise the influence of the environment on the germ-plasm, but whereas Weismann limits the influence solely to the germ-plasm, Lamarckians maintain that the influence is not so limited, that the same process by which the influence is made on the germ-plasm is extended, so that not alone is the germ-plasm modified but its various stages of development—the germ, sperm, zygote, and embryo—are similarly modified, and that the modifications produced appear at birth as innate characters or variations. Since the environment includes everything to which the organism can react, and since change in environment means change of reaction on the organism, it must be plain that when through unfavourable changes organisms are forced to adopt new methods of feeding—as when the giraffe, unable to procure nourishment through gradual failure of surface vegetation, is forced to take on the habit of eating the leaves of trees—it must be plain that the effects of new habits affect the organism, so that through transmission of the effect the various parts affected become more and more adapted to the new mode of life until full adaptation is reached. And the changes effected are in coördination with each other, since the effects of the new mode of procuring food, seeking protection, &c., are brought about through the nervous system.

That modification of function relatively quickly modifies the organ is well seen in John Hunter's experiment with a seagull. He took a gull accustomed to feed on soft food and fed it on grain for a year. At the expiration of the year he killed it, and found that the muscular structure of the stomach had been so markedly modified as to assume the appearance and consistency of a gizzard. Under the necessary circumstances such a change in character would be transmitted. Now what Lamarckians claim is this: When gradually climatic and other changes occur in the environment of animals (and there is clear evidence that such changes have continually taken place all over the surface of the earth) so as to affect unfavourably their needs for food, protection, &c., the animals must either (1) die out, (2) migrate to a more favourable environment, or (3) adopt new habits as regards feeding, &c., as in the case of the giraffe already mentioned. Now these new habits being gradually acquired, and being forced on all alike, the young and old, and on both sexes, and being voluntary—i.e., through the need or desire for food, &c.—the nervous system, governing not alone the germ-plasm but its developments, is also modified. As a result the various parts affected in the satisfaction of the needs become coördinated and correlated, as in the giraffe, in which not only are the head and neck elongated, but also the fore-quarters and to some extent the hind-quarters, as the result of the new habit of feeding on the leaves of trees. As it must be plain that the effects of the new habits are innate characters and thus capable of transmission, in process of time the parts involved in the new habits must gradually more and more approximate to full adaptation as we see them, so as to answer satisfactorily the needs of the animals. By that means of modification we are able to understand how slight gradations are brought about, since a new habit may at times only partially modify an organ.

The above explanation is altogether different from that held by biologists as regards Lamarckism and is one capable of making clear the whole *modus operandi* of organic evolution.

A fact which has evidently been lost sight of in postulating a creative force acting upwards and definitely, is that there are certain organisms living in the present day that have existed in their present forms from the very earliest periods, thus demonstrating that in their case at least the creative energy or *vis a tergo* did not work upwards in any direction. To postulate a force acting extrinsically on matter is to lose the full significance of evolution. This world is a physical one, but within its potentialities, I claim as my belief, is that of the evolution from physical conditions of a form of energy called "mind." Just as from the 32 pieces of the chess board games requiring the highest mentality may be evolved according to the correlation of the pieces on the board, so from the correlation of sensory impressions on the higher cerebral centres, mind or consciousness may be and is gradually evolved. Instinct is the result of the transmission of accumulated habit—mind or consciousness is the correlation of instincts; and in the process of evolution it is the gradual evolution of the nervous system crowned by the brain which renders possible, not alone the organism with its various organs subserving the needful functions, but the evolution from a minute mass of living protoplasm of man, with a mind capable of pronouncing an opinion on work which must have been designed by another and a higher yet similar mind.

In the above criticism of M. Bergson's theory I have not taken into consideration his differentiation of intellect as exhibited in man, from intuition in man and instinct as exhibited in the hymenoptera, since structural conditions through the nervous development can be made to account therefor.

I am, Sir, yours faithfully,

Bridgetown, Barbados, Nov. 29th, 1911. R. F. LICORISH, M.D.

SECURITY OF TENURE FOR THE MEDICAL OFFICER OF HEALTH.

To the Editor of THE LANCET.

SIR,—I was glad to read the sentiments expressed in your leading article on this subject in THE LANCET of Feb. 3rd. What has happened to members of the Public Health Service since the issue of "The Sanitary Officers (outside London) Order, 1910," has proved that I was none too pessimistic as to its benefits when I wrote an article thereon which was published in THE LANCET of Feb. 25th, 1911, p. 542.

Cases such as those at Claypole and Edmonton do not occur with sufficient frequency to attract the attention of the lay papers and their readers, although one case is enough to dishearten *all* medical officers of health subject to three months' notice, and quite sufficient to discourage them from displaying any energy or honesty in their work. If the general body of ratepayers only perfectly understood what the present chaotic state of the law means to the detriment of their families and themselves, there would soon be an insistent and persistent demand that the Local Government Board should without delay amend the Order so that the tenure of office of the medical officer of health should be the same as that of the doctors who attend sick paupers.

Of course, everyone interested in the public welfare welcomes the recent instances of the Board's firmness in dealing with corrupt councils, which firmness is more effectual in the case of a whole-time officer, because in his case the half salary repayable to his council is a considerable sum and not a mere trifle (say £10 to £25) as in Claypole, Yorks. But an amended or new Order giving security of tenure to medical officers of health *whose whole time is engaged in public health work* would relieve the Local Government Board of this unpleasant duty.

Loss of office is sad but not serious for a part-time officer, for he has his private practice still for maintenance of himself and family, whereas to a man whose livelihood is entirely dependent on his official salary dismissal (although without just cause) brings about his complete ruin, especially if he is (as at Edmonton) over 50 years of age and therefore shut out by age-limit from applying for 90 per cent. of the appointments that may fall vacant.

I am, Sir, yours faithfully,

Feb. 6th, 1912. ENERGY.

THE MEDICAL PROFESSION AND THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—In a letter published in THE LANCET of Jan. 20th I expressed an opinion that the present executive of the Association was too much in favour of the National Insurance Act, and only demurred to some of the medical provisions of that measure. I consider that opinion largely strengthened by the recent report of the Council to the members of the Association. Many of those who read carefully that—in my opinion—inaccurate and misleading document will have forced upon them a conviction that they who drafted and approved it must have views, to say the least, very different to those of a large number of the profession. There is no acknowledgment of error with regard to the Whitaker incident, although it has been so universally condemned by the profession that not even a representative meeting will be able to whitewash it. I do not wish, however, to re-open this subject. The sooner it is dead and buried the better, but I may instance its treatment in the report as evidence of how little the present executive care for outside professional opinion. No reasons are put forward stronger than those advanced in the inaccurate circular issued at the time, and approved at the last Council meeting. It would seem to be thought that weak and insufficient reasoning acquires strength and validity by frequent repetition.

Take, again, that portion of the report that the *Times* did us the honour to publish in its issue of the 3rd inst. The whole is a kind of appeal to the profession to accept the Act and work it for what it is worth, in spite of its admitted injustice to the profession. At the same time it suggests that if, notwithstanding the Council's good feelings towards it, certain conditions are not granted under the Act, it will itself advise the course it here condemns.

I take strong exception to some of the inaccurate and misleading statements. Speaking of the "suspension of medical benefit" (32): "It is only too probable that the great bulk of the insured would be quite content to receive a cash allowance which would enable them to join medical clubs of their own outside the Act, while the Friendly Societies would welcome it as practically restoring to them that full and complete control of their doctors which the Insurance Act had taken away." Not a word is said as to how many would utilise the money thus received in paying their private doctors' fees, as they do now, but it is gratuitously assumed the number would be very small. The suggestion that the "*great bulk*" would form "medical clubs of their own outside the Act" is, in my opinion, very misleading. "That the Friendly Societies would welcome it as practically restoring to them that full and complete control of their doctors which the Insurance Act had taken away" is, in addition, contradictory to previous official statements of the Association. It has over and over again been said that the Harmsworth amendment in reality gave back the control the Act was supposed to have withdrawn, and very few, with the exception of certain members of the Council, have ever regarded of the slightest good the modification of that amendment acquired by the Association at the latest stage of the measure, and which has been tabulated as one of the *gains* of the Association. There is no need to argue this point. The fact remains that in spite of this precious *gain* the representative meeting last November persisted in demanding the deletion of the Harmsworth amendment altogether, and the appeal sent up by the executive to the House of Lords amply proves this. "The last four lines of the subsection (15, 4) as finally amended in the House of Commons do, it is true, secure to a great extent free choice (!), *but in the opinion of the profession the whole subsection, even as amended, is undesirable in the public interest not less than that of the profession and should be deleted.*" If, then, the control of the doctors has been recovered by the Friendly Societies through the Harmsworth amendment, it is untrue to say that the suspension of medical benefit "would have the effect of practically restoring to them that full and complete control which the Insurance Act had taken away."

What, also, is to be thought of the following argument for the profession working the Act? "In short, suspension of medical benefit renders possible a vast extension of club practice for provident persons." If the profession accepts the working of the Act, and the panels are formed, a "vast extension of club practice" will not only be *possible*, but *certain*—a club practice far more degrading in my opinion than the present system, and far more deadly to the interests of the general practitioners of the country. After all, whatever the defects of the present system may be, it is in the hands of the profession at any time, if united, to reform it. But it will be otherwise when we have delivered ourselves up tied and bound in the meshes of this Act, to form a second-rate State Medical Service most injurious to our own interests, and of doubtful utility to the public.

I am, Sir, yours faithfully,

Feb. 3rd, 1912. MAJOR GREENWOOD.

To the Editor of THE LANCET.

SIR,—Why should a doctor be paid higher than a labourer? Each does work for the State to the limit of their abilities, and no man can do more. This is the socialistic argument. Everyone who has met Socialists has heard it scores of times, and it seems that Mr. Lloyd George has imbibed this particular idea, but he knows too much of the sturdy character of the British labourer to attempt to fix *his* income by Act of Parliament. He knows that there would at once be a strike, and that the labourers would hold together as one man, even though it meant a total suspension of income.

But that which he would never and could never have done in regard to the lower type of labour he has attempted to do to the higher, and so you have this idea not only fully carried out, but you have an extension of it, and a limit placed by Act of Parliament upon the income of the doctor which could never have been placed on the labourer. The doctors have absolute power in their hands. Any man can be a labourer, but only trained men can be doctors. It takes many years to fit a doctor for his duties, but if the doctors stand shoulder to shoulder there is no Act of Parliament which can compel. It does seem absurd that all other people in the country are permitted freedom to sell their services at the highest price they can obtain according to the laws of supply and demand, but the doctors only should be specially selected to be excluded from this freedom.

If the medical profession know their own interests they will neither accept this Bill nor any amendment of it. There is one thing to fear, and that is, that if some new conditions beneficial to them are conceded they will be undermined gradually in the operation of the Bill, and that unless a determined stand is taken against it now we shall have the State

employing a staff of doctors at say, £150 to £200 a year, and the profession will sink to a lower level in Great Britain than in any other part of the world.

I am, Sir, yours faithfully,

ARTHUR E. BECK

King's Norton, Feb. 2nd, 1912. (Prospective candidate for Derby).

To the Editor of THE LANCET.

SIR,—The following views on the Recommendations of the Council of the British Medical Association, especially as regards the formation of an English Medical Insurance Council and of a National Medical Insurance Council, are shared by many medical men in Brighton and other districts. It is held that Recommendations 1, 2, and 3 should be omitted and that the following resolution be substituted :—

That the Council be instructed to notify H.M. Government through the Insurance Commissioners that the medical profession can take no share in the working of the Act until the six cardinal points are granted by law.

Recommendation 4 should be altered as follows :—

That the Council be instructed to make all necessary arrangements for assisting the Divisions and Branches in the appointment of provisional Medical Committees in every insurance area to safeguard the interests of the profession and to organise a national medical service under medical control.

Recommendation 5 should read :—

That the Council be instructed to take steps to organise the profession so as to secure that on and after July 1st, 1912, no person shall be able to secure medical attendance under a contract practice appointment held at lower rates than those which may be agreed upon as adequate by the Representatives for attendance upon insured persons.

Recommendation 6 should be altered to—

That an English Medical Insurance Council be formed from the British Medical Association and other medical bodies and a Joint National Medical Insurance Council for England, Scotland, Ireland, and Wales.

In conclusion, it is of vital importance that a meeting of English Representatives of the British Medical Association be held at once to exchange and focus opinions on their future action at the special Representative meeting on Feb. 20th. A similar course obtains in the groups and committees of M.P.'s in the House of Commons, and is perfectly fair and proper. It may be held that Recommendation 5 may mean the use of the "strike" weapon. Are we prepared for this? Is it humanly possible to call everyone out for such a purpose? What would be the consequences of failure? Would our *first* strike be likely to be successful? I think with good organisation we should win, and then we could present the public with a really efficient public medical service. I am, Sir, yours faithfully,

Worthing, Feb. 6th, 1912. F. G. BUSHNELL.

To the Editor of THE LANCET.

SIR,—I have read all your leading articles on the Insurance Bill, and have been much impressed by the attitude of dignity and reserve you have taken up. For this reason I call your attention to a point which concerns more especially men like myself, the rank and file of country practitioners. My practice, and there are many others like it, is a very poor one, composed largely of club patients, the men being mostly in Friendly Societies, the women and children in personal medical clubs. Now, the Insurance Act cannot hurt us financially; it would probably benefit us. I am not a member of the British Medical Association; I have signed no pledge exploited by a journal, and have no intention of doing so. What line the best members of the profession decide is to be taken, that line I shall take—i.e., I shall stand by the profession. This remark was, however, made to me only yesterday by a large landowner and officer on the retired list: "It will be a great pity surely if 29½ thousand men try to wreck a measure designed for the national good because their pockets are touched." Now, Sir, the point I want to draw your attention to is this. Men like myself, who are trying under adverse circumstances to keep up the dignity of the practice of medicine and surgery, look to those above who have constituted themselves the champions of the profession to take their stand not only from a financial point. The fees of the consulting world are paid mostly as a matter of course; it is often the country practitioner who sees that they are paid promptly and without question. I think that consultants are hardly aware how difficult it is for the man in the country to maintain the professional standard. I express myself haltingly, I fear. What I am aiming at is, that in our differences with the Chancellor and his advisers we are making too much of the financial side, not enough of the fact that we are professional men like himself (only that the nation pays him a good salary and he has not to worry about ways and means), and that our services are no more to be exploited as the Government think fit than those of, say, members of the Bar. I am, Sir, yours faithfully,

EDWARD T. JONES, M.R.C.S. Eng.

Eastmeon, Hants, Feb. 5th, 1912.

To the Editor of THE LANCET.

SIR,—Is it not waste of time and money to hold a Representative meeting of the British Medical Association while we are in the dark as to the Commissioners' intentions, unless the intention of the meeting is to declare finally that we will not work the Act as it stands? Does the Council of the Association realise this? If the funds are so limited that the Commissioners cannot accede to our vital demand for adequate remuneration, why temporise further on side issues?

The Commissioners can, however, and conceivably would, suspend medical benefits in refractory areas or altogether, a result the Council appears to dread, as they consider this result would be extremely serious to the profession by rendering possible a vast extension of club practice for provident persons, and bad debts in the case of the improvident. To my mind this is a delusion. Some six million insurables are already in clubs, and it is practically certain that, as at present worked, this is not far from the clubable limit. Most of the medical officers would be unable, even if willing, to cope with a huge and sudden increase of membership.

At a crisis like this, with the state of feeling evidenced by the 26,000 signatures to the Association pledges, a large number of them would, I feel sure, be willing to fall in with the desires of the profession, as voiced by the Council, even to the extent of resigning their appointments. But this would not be necessary. They would simply be required to raise their terms to those declared equitable by the Council for working the Act. And does anyone believe they would hesitate to do so? Two or three thousand new medical officers might possibly be procured to work the Act at 4*s.* 6*d.* per head per annum, or at less than the Association rate, but to me it is quite clear that it would be utterly impossible to officer a vast extension of club practice, and there are nine millions to provide for. The bad debts of the improvident could be evaded by a refusal to attend except on a cash basis. Those unable to pay would, as at present, be cared for by the guardians, who would recover the costs later in the courts or from the rates.

If the Commissioners attempted to work the specially refractory areas this could be thwarted by a general refusal of the profession to work the other areas, not to mention financial aid to those locally hard hit. But the whole scheme is so much more than the mere provision of ordinary medical attendance, so interwoven with hospital treatment, for example, that the Commissioners, however tempted, would not be likely to force a deadlock. It is much more probable that they would report to the Government their inability to satisfy the profession.

If the Council really considers that the Commissioners can offer acceptable terms, why not wait until they are offered? Most of us consider they cannot, and will stand by our pledges.—I am, Sir, yours faithfully,

A HULL PRACTITIONER AND CLUB SURGEON.

Feb. 5th, 1912.

OXFORD OPHTHALMOLOGICAL CONGRESS.—This Congress will assemble at Keble College, Oxford, on Wednesday, July 17th next, and the meeting will be held on Thursday and Friday, July 18th and 19th. Members are reminded that cases and specimens will be welcomed. Mr. Sydney Stephenson, honorary secretary to the Congress, should be notified at 33, Welbeck-street, London, W., by any member willing to give any exhibition or demonstrate any operation. It is hoped that an "opaque projector" will be at the disposal of members for purposes of demonstration.

THE WAR AGAINST TUBERCULOSIS IN THE UNITED STATES.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

The War Budget.

THE National Association for the Study and Prevention of Tuberculosis in the United States is justly proud of the work it has accomplished. The third annual statement of the expenditure incurred has just been published and deals with the year 1911. The total outlay for the erection of new hospitals and sanatoriums as well as for the treatment of patients slightly exceeded the sum of £2,360,000. The examination and treatment of patients at dispensaries account for only £170,000. The work of propaganda carried out by numerous local associations and committees cost £100,000, and £260,000 were spent in discovering and treating cases in schools, prisons, asylums, and for the cost of special work against tuberculosis undertaken by the public sanitary authorities. Some other small details bring up the grand total for the year's outlay to £2,900,000. This expenditure, while not much larger than that of the previous year, is equal to nearly double what was spent in 1909. It must be borne in mind that a sensational agitation has been organised in the States. This has its merits and its accompanying defects. Anti-tuberculous travelling exhibitions were sent round the country and lecturers accompanied these shows. Thus a number of persons were attracted who otherwise would not have given the subject a thought. A great mass of people, ignorant of medical questions, were familiarised with some of the leading principles of ventilation, cleanliness, the danger of sputum, and other simple rules of health for the prevention of tuberculosis. At the same time, among those who were thus taught there were here and there a few persons who had at once the kindliness of heart and the financial means to give monetary assistance to the movement. But it is necessary to bear in mind that this is a new movement, a new revelation to the great mass of the population showing what could and should be done. Under the spur of surprise and the charm of novelty generous enthusiasm was evoked, organisers and lecturers gave their services gratuitously, and voluntary subscriptions poured in from all quarters.

State and Municipal Help.

Wisely it has been foreseen that this enthusiasm could not be expected to last. The novelty would wear out, the enthusiasts would tire of giving voluntary service, other agitations would arise, and other calls would be made on the purses of generous subscribers. A well-organised sensation is very fruitful but short-lived. Once the mass of people are familiarised with the benefits of open-air treatment and with the fact that tuberculosis can to a large extent be prevented, they will attend other lectures, go to other museums, and subscribe money to some more novel form of agitation. Therefore to secure permanent benefit, the movement, while it lasts, must be directed upon the central and local authorities. Pressure must be brought to bear to compel them to establish permanent institutions that will continue to exist when the attention of the public is diverted in some other direction. Thus it comes about that to-day the National Association for the Study and Prevention of Tuberculosis is better pleased by the increase in grants which the State legislatures and the local or municipal authorities have made than by the increase of voluntary subscriptions. Also it must be borne in mind that the prevention of tuberculosis is a matter that concerns individually every inhabitant. The cost of prevention should, therefore, not be left to a few public-spirited and generous individuals, but form part of the local and national burdens. Consequently, the National Association is particularly careful to point out that the percentage of money contributed by the public authorities is greater in 1911 than before. It then amounted to 66·2 per cent. of the total, while in 1910 the money spent from the public funds was 62·6, and in 1909 only 52·5 per cent. of the total. For the present year large grants or subsidies out of the public funds have already been voted, and this money will be employed in dealing with tuberculosis. Of these sums, £940,000 are "from State appropriations" and about £1,140,000 for county or local purposes. The Federal Government, over and above this State and local expenditure, devotes about £200,000 a year to maintain several special sanatoriums for treatment of tuberculosis.

The States that have Done Best.

Of course there is a very great difference in the attitude of the various State legislatures, just as in England we find the county councils widely differ from each other in enlightenment and enterprise. In expenditure for the prevention of tuberculosis the New York State comes first, having spent last year for this purpose £710,000. Of this sum £211,000 were derived from voluntary subscriptions and the rest came from the public funds—that is, from the tax-payer. Pennsylvania comes next with an anti-tuberculous budget of £451,000, of which £109,000 were due to voluntary gifts. In Massachusetts the outlay for last year—and all the following figures are for 1911—was £221,600, of which £58,800 were voluntarily subscribed. The fourth on the list is Colorado, but here the situation is entirely reversed. Denver is the capital of Colorado, and its delightful climate has attracted many phthisical patients. Nevertheless, the public authorities have done little or nothing for these sufferers. Certainly there is the excuse that it is a new city and a new State. In 1880 there were only 35,630 inhabitants at Denver. Ten years later this number had increased to 133,859, and by that time the inhabitants were able to afford £500,000 to build their State house, but after a further 11 years of increasing prosperity they could not be persuaded to spend more than £13,100 for the war against tuberculosis. On the other hand the voluntary subscriptions exceeded that of all the other States except the State of New York, for it amounted to £136,000. The contrast given by the next on the list is in precisely the opposite direction; the proportion of voluntary subscriptions is lower in Ohio than in any of the other leading States; it amounts to only £15,000 out of a total of £144,400. In Connecticut the total is £119,400, the voluntary share of this being £25,900. In New Mexico, again a new State, the voluntary share is very high, £69,100 out of £118,100. Illinois, which is becoming an old State—in any case it is middle West and not far West—has barely a quarter of its tuberculosis budget from private subscriptions—namely £20,719 out of £94,885. Finally, Maryland, one of the oldest States, is indebted to private subscriptions for only £14,800 out of £78,000.

Municipalities and Dispensaries for Tuberculosis.

Such is the list of honour showing the total amounts spent by the nine States which are in the forefront of the war against tuberculosis. The older the State, the more experienced in legislative work, the greater the proportion of the expenditure borne by the public purse. In the raw new States there is less organisation, and much more depends on the initiative and enterprise of private individuals. In the older States the law is more likely to insist that the whole community shall pay for public services, and that such services shall be organised. Thus last year the State of Massachusetts enacted a law that every town with a population of 10,000 or more must establish and maintain a dispensary for the discovery and treatment of poor people suffering from tuberculosis. The towns are to be fined each time they are called upon to establish such dispensaries and fail to do so. Those towns that also establish a special hospital for the treatment of tuberculosis can obtain from the Commonwealth £1 per week for every patient they treat, who cannot pay for himself.

In Chicago there is the same tendency. Up to September, 1910, there were seven private dispensaries served by 25 physicians and employing 10 trained nurses, and they discovered and assisted a large number of cases. Now, however, the municipality has taken over these dispensaries, and are building a municipal sanatorium for the reception of 350 curable cases. The dispensaries will discover suitable cases for sanatorium treatment and will control the patients after their discharge from the sanatorium. Two new dispensaries and two new night clinics have been opened and the nursing staff doubled. The number of patients seen at the dispensaries was 20,139 in 1910 and 25,263 in 1911. The visits made to the homes of the patients increased from 18,500 to 27,174 in the last two years. 35 per cent. of the patients examined at the dispensaries were found to be tuberculous. In all, 7697 cases of tuberculosis were reported to the Chicago Health Department in 1911 and 5149 in 1910. Out of the total 12,846 cases of tuberculosis notified during the last two

years 20 per cent. were reported by the tuberculosis dispensaries.

The Campaign in Pennsylvania.

One of the leading authorities on the question in the United States, Dr. Lawrence F. Flick, has recently issued a report on the progress of the campaign in Pennsylvania, which, it appears, began in 1892 by the formation of a Society for the Prevention of Tuberculosis. Before that time the harbouring of patients in the general hospitals and almshouses had helped to isolate advanced cases and thus prevent the spread of the disease. Dr. William Webb, however, taught that tuberculosis was contagious early in the "eighties," and Koch discovered the tubercle bacillus in 1882. As these new doctrines spread, doubts arose as to whether tuberculous patients should be admitted in general hospitals and almshouses, and in the course of time many special institutions were created. There are now in the State 14 charitable institutions with 600 beds, two public institutions with 1100 beds, and six run for profit with 100 beds. Then there are 125 dispensaries, and most of them give free milk and eggs to poor patients. Since the commencement of the campaign and up to 1911 Dr. Flick estimates that about £1,200,000 have been spent in Pennsylvania in the crusade against tuberculosis. Of this the amount contributed by private societies was a little over £400,000. The Commonwealth of Pennsylvania spent £600,000 and the city of Philadelphia £200,000; nearly two-thirds of the entire amount has been spent since 1907, and there are now about 1800 beds available for tuberculous cases.

Effect of Tuberculosis on the General Death-rate.

The statistics show, for instance, that whereas in 1870 at Philadelphia 3·42 and in Pennsylvania 2·13 per 1000 of the population died from tuberculosis of the lungs, these figures were reduced to 1·85 and 1·15 per 1000 respectively in 1910. Dr. Flick, however, insists that what with the change of views as to tuberculosis and the acceptance of the theory of contagion, there have been some suppression and change of nomenclature as to the cause of death, which must slightly affect the accuracy or comparative value of the statistics. Indeed, the word tuberculosis was not officially introduced in the nomenclature of the State before 1904, though it had been used unofficially some time previously. Then, again, many patients went away to a better climate who would now have spared themselves this trouble. The reduction in the death-rate from this disease has been greater in the towns than in the rural districts. Outside of Philadelphia and throughout the State the reduction since 1870 is estimated approximately at 48 per cent.

For the city of Philadelphia Dr. Flick has drawn up three tables. The first table contains the deaths which by common consent are undoubtedly due to tuberculosis. The third table contains deaths attributed to a great variety of diseases which are sufficiently similar to tuberculosis as to serve as a cloak to conceal the truth. Then there is an intermediary or second table where many names are also used, but which can with less hesitation be earmarked as tuberculosis. These three tables are so comprehensive as to include every death that has occurred during the 40 years which may be due to tuberculosis. The reduction in the "tuberculosis" table in the 40 years was equal to 41·6 per cent., and the "probably tuberculosis" 89 per cent., the mean being 68·7 per cent. More than one half of the reduction has occurred within the last ten years, but there has been no corresponding reduction in the death-rate from other diseases. On the contrary, excluding the "tuberculosis" and "probably tuberculosis" the death-rate was 14·31 per 1000 in 1870, 13·93 in 1880, 14·82 in 1890, 14·80 in 1900, and 13·50 per 1000 in 1910. By also excluding the "possibly tuberculosis" the death-rates during the same five years mentioned above are 8·04, 8·18, 8·11, 9·0, and 8·42 per 1000.

Isolation and Sanitation.

From his observations Dr. Flick concludes that the reduction in the death-rate largely depends on the isolation of "open, ulcerative, pulmonary tuberculosis." He therefore argues that in the campaign against this disease much simpler means might be employed. Before the scare about the contagious character of tuberculosis the open ulcerative cases were accepted in the general hospitals, especially during the final, and for the public the most dangerous, stages. Dr. Flick insists that isolation is the most effective preventive, but that it is not necessary to have special hospitals for this purpose. "It has been found," he says, "that advanced cases can be treated in any hospital with entire safety to other inmates of the hospital provided certain simple rules of cleanliness are strictly lived up to." If the sputum is properly disposed of the moment it is given off the patient can be made "non-contagious and be safely kept in any locality." Also the general hospitals are usually nearer to the homes of the people, so that less objection is raised to the separation caused by isolation.

It is strange that in all this, and while recording the great reduction achieved in the prevalence of tuberculosis, Dr. Flick has not a word to say about the general sanitary improvement which assuredly must have been accomplished during the last 40 years. One of the great advantages of the campaign against tuberculosis is that it touches on so many other matters besides the one disease. Poverty, filth, overcrowding, bad drainage, the pollution of air, the adulteration of food, the contamination of water, and the consequent reduction of human vitality—these are the conditions that favour disease and that prevail where tuberculosis claims the largest number of victims. As sanitation has improved so has the frequency of tuberculosis declined, and the same may be said of many other diseases. At the same time everyone will recognise that the more overcrowded and insanitary a district the more necessary it is to remove cases of tuberculosis that are so far advanced as to become centres of contagion.

MOTORING NOTES.

(FROM A SPECIAL CORRESPONDENT.)

Noisy Cars at Night.

THE Commissioner of Police for the metropolis has issued a most reasonable and courteous circular in which he points out the seriousness of needless use of sirens, open cut-outs, and multiple horns, especially at night time, and he appeals to all drivers to assist in diminishing this nuisance. The disturbance to all residents in London is undoubted, and it is certainly to be hoped that his appeal will have the desired effect.

The New Bosch Dual Ignition.

For the medical motorist it is an advantage to have a dual method of exploding the mixture of a petrol motor. To start off, possibly to a most urgent case, and to be delayed perhaps miles from a repair shop on account of ignition faults, is more than annoying. Of course, it can be argued that the modern magneto rarely gives trouble, and I quite admit it; but it may. In motoring, as well as in other affairs, the nnexpected occasionally takes place. It is thus as well to have, if possible, a dual ignition, and a very good one has been put on the market by the Bosch Magneto Co., Limited, of Newman-street, London, W. The apparatus consists of either a vertical or horizontal coil, the winding of which is similar in design to the armature of the Bosch arc-light magneto, and the spark produced is in every way as effective. The switch and coil are combined in one, so that external connexions between them are entirely dispensed with. A compound cable consisting of four differently coloured and highly insulated conductors is supplied, and most of the Bosch magnetos can now be converted to this dual system at a moderate cost. The device is provided with a locking arrangement guarding against the improper use of the car. This is important, for many medical men on their rounds leave no one to guard their automobiles while they are inside a patient's house, and it is a satisfaction to know that the "young fry" cannot start the car in addition to blowing the horn.

An Electric Car Cleaner.

In these days of cloth upholstery it is rather difficult to keep the interior of a landaulette clean, and therefore the "suction" cleaner, which dislodges dust that an ordinary brush will not reach, is useful. A suction cleaner, which is known as the "Nuway," is sold by the London Motor Garage Co., of Wardour-street, London, W., which is easily

attached to any electric light holder, and is, I understand, not extravagant.

Cost of Motor v. Brougham.

We have referred above to the experience of "F.R.C.S. Eng.," who now sends us the following additional details:—"*Cost of running a 15·9 h.p. Daimler limousine motor-car in 1911:*—

Total mileage	5650 miles.
For pleasure, about	1300 ,,
For professional purposes, about	4350 ,,
Total cost for year (including depreciation)	£306 9s. 7d.
Chauffeur	90 14s. 0d.
All other costs	110 0s 0d.
Depreciation 20 per cent. of £528 18s. 2d. (initial cost)	105 15s. 7d.
Total cost per mile, nearly	1s. 1d.
Chauffeur, per mile nearly	3·9d.
All other costs per mile	4·6d.
Depreciation per mile	4·5d.
Petrol used, approximately	280 gallons.
Miles per gallon, approximately	20 miles.
Car unavailable on account of re-varnishing and repairs	21 days.

The car was bought in June, 1910.

The *former cost of brougham and two horses* (one in morning, the other in afternoon) was:—

Total cost, including depreciation	£210 0s. 0d.
Mileage (all for professional purposes) about	4000 miles.
Cost per mile	1s. 0½d.

The limousine exceeds the brougham in appearance, readiness, speed, comfort, convenience, and exhilarates the mind, whilst driving in a brougham dulls it. I should not like to go back to the latter. Thanks to the chauffeur, the car looks almost like a new one."

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Tuberculosis Exhibition.

AT a meeting of persons interested in the campaign against tuberculosis, presided over by the Lord Mayor, it has been decided to hold an exhibition in June to demonstrate to the poorer classes how tuberculosis may be prevented. A large and influential general committee has been formed, containing representatives of the medical profession, the health committee, boards of guardians, city aid society, and the other agencies interested in the public health, with the Lord Mayor as president, to make the necessary arrangements for the success of the exhibition.

General Hospital.

The vacancy created by the resignation of Professor Robert Saundby as physician to the General Hospital has been filled by the election of Dr. J. W. Russell, the senior assistant physician. Dr. Russell has had a very long period of service in the out-patient department, and his appointment to the post of full physician will be a very popular one. He recently met with a severe accident, the motor-car in which he was riding colliding with a tramcar during a dense fog, but is now making good progress towards complete recovery.

Feb. 6th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Royal Infirmary.

AT the annual meeting of the Royal Infirmary held on Feb. 5th a highly satisfactory report of the year's work was presented. The fact was deplored that there was a debt of upwards of £8000 hanging over the institution, and an appeal was made for increased public support. Mr. Ralph Brocklebank was elected president for the ensuing year. Mr. Brocklebank is one of those public men who support the charities of the city, not only with their substance, but also with their personal services. He has been a member of the committee of the "Royal" for upwards of 35 years. For 30 years he discharged the onerous duties of honorary treasurer, and for five years he has been chairman of the committee. His practical knowledge of both the policy and administrative details of the infirmary is very extensive. It may be safely asserted that no Liverpool citizen is worthier of the honour conferred upon him by the trustees of the hospital. The Liverpool School of Tropical Medicine attached to the University of Liverpool, having felt that their important work could be carried on in a more satisfactory way if they had ward accommodation near to the University to enable the students to watch the constant changes in patients suffering from those diseases, approached the committee to see if such accommodation could be provided. Negotiations were now in progress, and it was hoped that they would result in the making of satisfactory arrangements. The value of the new out-patient department was amply demonstrated at the time of the great strike riot on Sunday, August 13th, when some 200 cases were brought to the hospital for treatment in about two hours. The sudden rush of so many surgical cases depleted the stock of dressings, &c., thereby putting the hospital to very considerable expense in replacing those articles. During the year electric lighting had been extended throughout the hospital and residential blocks, and the three lifts were also being electrified with a view to economy in working.

Liverpool Infirmary for Children.

At the annual meeting of this charity, held on Jan. 30th under the presidency of the Earl of Derby (Lord Mayor of Liverpool), the report showed that the number of patients treated during the year were: in-patients, 1338; out-patients (new cases), 15,590; attendances, comprising old and new cases, 55,308. Lord Derby, in noting that cognisance was taken in the report of the question as to whether the Insurance Act when it came into actual operation would affect adversely the finances of the hospital, said that he had not the slightest doubt that it would mean the withdrawal of a certain number of subscriptions; possibly not quite so many as people thought, but there was certain to be a reduction. He did not want to enter into political matters, but the question was whether when the Act came to be amended, as amended it must be, as nearly every Act was, by having the rough corners knocked off it, it would not be found that some contributions paid under it would find their way from the State through the individual to the hospitals. He should vehemently oppose the State or the municipality having anything to do with the management of voluntary hospitals because, in the first place, it would kill voluntary effort, which was the essence of the good work of those institutions; and, secondly, from what he knew of Government departments it would certainly mean increased expense.

The Lancashire County Council and the Danger of Vaccination Exemptions.

At the quarterly meeting of the Lancashire county council held on Feb. 1st, on the motion of Mr. Robert Sephton, the chairman of the public health committee, it was resolved to support the Cumberland county council in drawing the attention of the Local Government Board to the grave menace to public health disclosed by the large increase of exemptions obtained from vaccinations since the year 1903, the increase in the administrative county being about 600 per cent., or from 3 per cent. to 21 per cent. of the births.

Runcorn Sanitation.

Mr. Tulloch, Local Government Board inspector, held an inquiry last week into the application of the Runcorn urban council to borrow £8000 for sanitary works in the town and £2000 for water-main extensions. Considerable opposition was forthcoming to the first part of the application from property owners. The authority proposed to serve notices on the owners of a large number of houses, compelling them to convert the existing ashpit privies to the water-carriage system. If the notices were not complied with the council would do the work and bear half the cost. There were 2600 ashpits in the town. The property owners urged that the cost of the conversions was excessive. The inspector said that property owners who did the work themselves and paid the whole cost need not confine themselves absolutely to the specifications, but were bound to do the work to the satisfaction of the council. There was no opposition to the application for a loan for water purposes.

Feb. 6th.

NEWCASTLE-ON-TYNE.

(FROM OUR OWN CORRESPONDENT.)

The Insurance Act: A Local Member's Views on the Profession.

DURING January Mr. J. M. Robertson, M.P., Parliamentary Secretary to the Board of Trade, held several meetings in his constituency, the Tyneside Division. His first meeting was held on Jan. 15th, and dealing with the opposition to the Insurance Act he remarked "that the measure was perhaps a little ahead of public opinion. They could not change society without pinches and wrenches somewhere. The healing profession had shown more readiness to cry before it was hurt than any other section of the community. It was an unfortunate fact that the bulk of the profession were Tories, the reason being that they had to give so much time to the laborious training needed for their own profession that they knew very little about anything else—he meant in a public way. They were the worst set of politicians in the country and never seemed to find time to make themselves good politicians. The majority of them were probably Tariff Reformers, and it was on that ground, he was afraid, that they had been so ready to set up all that violent and furious opposition to the Insurance Act. If it had been a proposal to levy a tax to make the people's food and boots dearer there would have been no meeting of doctors to protest. They would have said nothing."

This quotation is from the local press, and the effect of this account of the meeting was what might have been expected. Members of the medical profession wrote to the press controverting the various statements, one of the most prominent of such letter-writers being Dr. Mears, of North Shields, who dealt with the points of Mr. Robertson seriatim, and denied the statement that most doctors were Tories and Tariff Reformers.

A day or two later at another meeting, Dr. T. L. Bunting being in the chair, Mr. Robertson said: "He thought that medical men had been strangely ready to cry before they were hurt. If here and there the position of the doctors was found to be a little worse measures would promptly be taken to remedy the evil. His own belief was that the income of the profession would be considerably added to." At the end of Mr. Robertson's address Dr. Bunting observed he was sorry that Mr. Robertson had made an attack on the profession, adding, "Honestly, I do not think he understands it." The chairman went on to point out that if the way of living of any other section of the community, say the miners, had been altered by a Bill without any previous consultation there would have been a great ferment. He did not think the attitude of the profession was dictated by their politics, except in the case of a few extremists. He was quite sure that a number of doctors were going to suffer heavily, and he wished to protest against what he thought was to some extent an attack on the honour of the profession to which he belonged. Mr. Robertson, replying to this criticism, considered that it was the generosity of the chairman which made him take a chivalrous stand. He repeated that those who were concerned about the Act did not believe that the doctors would suffer, and that if here and there under special circumstances the doctors were worse off, remedies would be applied.

Further letters have appeared in the press concerning Mr. Robertson's views, and in one of his speeches Mr. Robertson described the medical criticisms as "childish," based on Tory feeling against a Liberal measure, and that he did not propose to deal with them in the press but to leave himself to the judgment of his constituents.

The net result of the remarks of the honourable member has been to create a feeling among the profession that no medical man should in the future support Mr. Robertson by taking the chair at his meetings. Mr. Robertson has had three medical chairmen, which ought to have proved to him that medical opposition to the measure is not founded upon party politics.

Proposed Tuberculosis Dispensary in Newcastle.

A conference of representatives from the city sanitary authority, the board of guardians, the Royal Victoria Infirmary, the Dispensary, the Hospital for Sick Children, the Northern Counties Hospital for Consumption and Diseases of the Chest, and the Northumberland and Stannington Sanatoria, was held on Jan. 19th in the council chamber at the Town-hall, Newcastle-on-Tyne. Sir Henry Newton presided. A statement was submitted from the medical officer of health, containing an estimate for the requirements of a tuberculosis dispensary to be established in the centre of the town. The cost was estimated at £1500 per annum. Sir George Hare Philipson proposed, and Dr. T. Beattie seconded, the adoption of the draft scheme, with the substitution of three advisory medical officers at £50 per annum each for the proposed two officers of the scheme. An amendment was moved by Dr. T. M. Allison, seconded by Dr. A. T. Wear, that instead of three advisory officers there should be six honorary officers. The amendment was lost and the original motion carried by a large majority. The further procedure in this business will be the submission of the scheme to the sanitary committee and then to the city council for confirmation. No doubt should the matter be confirmed there will be more details of the scheme set forth than have been given to the public up to the present.

The Scourge of Phthisis: Workmen and the Barrasford Sanatorium.

A meeting has recently been held between representatives of the committee of the Newcastle and Northumberland Sanatorium (Barrasford) and the representatives of the Medical Charities Fund of the various works on Mid-Tyne, for the purpose of the provision of maintenance of patients from the Mid-Tyne district requiring sanatorium treatment. Up to the present the sanatorium has not been one of the charities benefiting under the Medical Charities Fund, and the object of the meeting was to awaken interest in the efforts made at Barrasford to combat the disease of tuberculosis. Sir George Hare Philipson occupied the chair, and there were representatives from the great works on Tyneside. Councillor Smith (of the Newcastle corporation), in the course of his remarks, explained that to some extent the Newcastle corporation had led the way locally in the campaign against the disease by taking 20 beds in the sanatorium at a total cost of about £2000 per annum. After the discussion which followed it was considered that the best way to raise money for this particular purpose was that of a small levy among the workmen, and the meeting concluded with a discussion as to ways and means.

Feb. 6th.

WALES.

(FROM OUR OWN CORRESPONDENTS.)

The Welsh National Memorial.

THE promoters of the Welsh National Memorial to King Edward VII. set themselves the task of obtaining the sum of £300,000, and proposed to capitalise that amount and use the income in carrying out measures having for their object the prevention of, and they hoped the extermination of, tuberculosis within the Principality. The fund now amounts to nearly £200,000, and £178,000 have been invested. The introduction of the National Insurance Bill, including as it did provision for the treatment of tuberculosis, had the effect of diminishing very largely the number and amount of public subscriptions, but now that Insurance Commissioners for Wales have been appointed, and the distribution of grants for sanatoriums and other institutions will be largely in their hands, it is anticipated that further subscriptions to the Memorial Fund will be forthcoming, especially as it is understood that grants under the Insurance Act will be dependent upon the amount of local support obtained for sanatorium and other purposes. Active steps are being taken to incorporate the National Memorial Association by Royal charter. The work already carried on by the association includes an educational campaign by means of lectures, the distribution of literature, and by a travelling tuberculosis exhibition. Arrangements have been made to take over the West Wales Sanatorium at Alltymynydd in Carmarthenshire, which was opened in 1905, and the Penhesgyn Open-air Home in Anglesey. Twenty-five nurses are to be specially trained in tuberculosis work to act under the auspices of the association in different parts of the country.

The Classification of Paupers.

A further step has been taken by the Poor-law authorities in the three West Wales counties of Carmarthen, Cardigan,

and Pembroke in the direction of classifying on an extended scale the occupants of workhouses. At a conference of delegates from the various boards of guardians held at Carmarthen on Jan. 27th the Poor-law inspector of the Local Government Board, Mr. Hugh R. Williams, said that unless the guardians tackled the question of the feeble-minded it was probable that some other authority would be entrusted with it. In the 13 unions in the three counties there are 212 imbeciles and feeble-minded, 76 being in workhouses. The asylum authorities, in Mr. Williams's opinion, should deal with dangerous lunatics and the Poor-law authorities with the harmless and incurable, and of the two last-named there are a sufficient number in West Wales to justify the provision of a common home. He suggested that the Lampeter and the Tregaron workhouses might be used entirely for special purposes, the latter possibly for consumptives. With more general and complete classification he considered it would be possible to do away with half a dozen of the existing workhouses. The members of the conference passed a resolution to the effect that the time was ripe for the serious consideration of the condition of harmless lunatics and of the feeble-minded, and a committee was formed to draw up a scheme for more complete classification.

Infantile Mortality in Brynmawr.

In his annual report for 1911 the medical officer of health of Brynmawr, Mr. J. L. Thomas, states that the high death-rate among young children, which was equal to 145 per 1000 births, was due in great measure to the prevalence of diarrhœa during the summer months. Having in mind the important part played by improper feeding in this disease he adopted the novel method of distributing information as to the right method of feeding and rearing infants through the school children. But instead of giving them printed circulars to take home he caused appropriate instructions to be dictated to them. They then made a fair copy and took this to their homes, and it was hoped that this course would be more likely to impress both the children and the parents than if printed matter was distributed.

Feb. 6th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Edinburgh Royal Colleges and the Conference.

A MEETING of the Royal College of Surgeons of Edinburgh was held on Wednesday, Jan. 31st, to consider the invitation which had been received to attend a conference with the Insurance Commissioners. The meeting decided not to appoint representatives to attend the conference, but while declining the invitation, agreed that the Commissioners should be informed that some time ago intimation was made by the College to the Chancellor of the Exchequer that the medical provisions in the Insurance Bill were so unsatisfactory both to the interests of the public and the medical profession that, in its view, this part of the Bill should be withdrawn. To this opinion the College still adhered. The Royal College of Surgeons of Edinburgh was, however, willing to render any assistance in its power to the Commissioners should they determine to exercise their statutory powers in altering the terms contained in the Act, or to aid the Government in drafting an amending Bill, which would safeguard the health of the public and preserve the educational and professional interests of those whom the College represented.

A meeting, called for a similar purpose, was held by the Royal College of Physicians on Thursday, Feb. 1st, but some minutes before the hour of meeting a telegram was received from the secretary to the Commission intimating that the conference was "postponed." On the President taking the chair, he intimated the receiving of the telegram, and left it to the College to determine what their action should be under the circumstances. The College decided not to discuss the matter, but to pass from the special business for which the College had been called to meet. So, for the present at least, the question of a conference has ceased to trouble the mind of the profession in Scotland. How much opinion in Edinburgh may have been influenced by the strong lead given by the Royal College of Physicians of London, which met on Tuesday, Jan. 30th, it is impossible to estimate accurately, but the honour of priority lies with the London physicians, and they have the satisfaction of having had their action endorsed.

The Scottish Medical Insurance Council.

The Executive Committee which was appointed to take steps for the calling together of this body has issued to every practitioner in Scotland a copy of the statement. The statement indicates the steps by which combined action was arrived at and the constitution of the council which it is proposed to set up in Scotland. The council is to consist of one or more representatives from the insurance areas, as these are already defined in the Act; of the Scottish Committee of the British Medical Association; of representatives of the Universities; and of representatives of the Scottish medical corporations. This council when it meets will have to determine what policy is to be followed, and will select an executive to carry out its policy. The practitioners in the areas are requested to nominate suitable men from their respective areas, and to facilitate this being done each practitioner has been supplied with a nomination form; each person nominated must have both a proposer and seconder. The nomination papers have to be sent in to the secretary of the British Medical Association division in which the area is situated, and to facilitate this being done by those who are not members of the British Medical Association there is a list of the insurance areas showing the division in which each area is placed and giving the name and address of the divisional secretary. Every endeavour has thus been made to make the arrangements as simple as possible. After the nominations have been received voting papers will be sent out.

Measles at Inverallochy.

The public school at Inverallochy has been closed on account of an epidemic of measles. Over 30 per cent. of the pupils were absent, principally from the younger classes, the infant department being practically without pupils.

Contaminated Water at East Wemyss.

At a meeting of the Kirkcaldy district committee held on Jan. 27th, Dr. A. L. Currie, medical officer, reported on three deaths which took place at East Wemyss some time previously. The deaths took place after a dance, at which seven people had drunk water from a burn running through the village, which had been brought in for the purpose of washing dishes. Three of the seven had died, and Dr. Currie believed that their deaths were caused by the contaminated water they had drunk. There was a water famine in the district at the time. It was ultimately remitted to the clerk to consider who was responsible for the cleaning of the burn.

Honour to Dr. W. Simpson, of Buckie.

In presence of a large and representative gathering in the Masonic Hall, Buckie, on Feb. 2nd, Dr. W. Simpson was presented with a pony and trap and a silver salver in recognition of 40 years' service in the district. Ex-Provost Webster made the presentation, and in doing so said that it had arisen from a spontaneous desire on the part of Dr. Simpson's many friends to mark in some way their respect and esteem for him and their appreciation of his long period of service, over 40 years, in the community. Forty years was a long period in the life of any man, and in Dr. Simpson's case it represented 40 years of the best part of his life spent in their midst. Dr. Simpson's reply was an eloquent *résumé* of 40 years of country practice.

Dr. Thomas Wright, of Wick, has been appointed one of the medical referees under the Workmen's Compensation Act, 1906, for the sheriffdom of Caithness, Orkney, and Shetland.

The death occurred on Jan. 21st, at Tannadice, of Dr. David Kydd, at one time a well-known medical practitioner in Forfarshire.

Feb. 6th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The National Insurance Act.

THE Conjoint Committee of the British and Irish Medical Associations has issued a circular to members of the profession calling attention to the position of Ireland under the Act. It is remarked that under the Act, which comes into force on July 15th, no work will be required of the profession until January, 1913, and then only certificates. The question of remuneration for these will require careful consideration.

The compulsory section which was in the original Bill is *not* in the Act. Owing to the elimination of "medical benefit" there is outside the Act a great danger of a widespread and immediate introduction of contract practice absolutely under the control of Friendly Societies with enormously augmented membership. Later on approved societies with sufficient funds may introduce "medical benefit" as an "additional benefit." This may be administered under the same conditions as "medical benefit" in Great Britain, but the Irish Commissioners have power to leave the administration in the hands of the Friendly Societies, which, of course, would be directly opposed to the interests of the profession. For the present no arrangements of any sort should be made with Friendly Societies without first communicating with this committee. Further, the profession in Ireland has no voice in the selection of the medical men who are to serve on the Insurance Committees, as is conceded in Great Britain.

The Irish sense of humour has been tickled by the appearance in the Irish papers of advertisements by the Insurance Commissioners for applications from friendly societies, trade unions, public bodies, or other bodies desiring to become approved societies under the Act for the service of lecturers on the Act. It is proposed to form classes in Dublin and Belfast and other large centres where officials of existing organisations may receive special instruction. The Parliamentary Committee of the Irish Trades Congress has passed a resolution requiring the extension to Ireland of medical benefits under the Insurance Act. Mr. John Dillon, M.P., defending the Nationalist Members of Parliament for not allowing medical benefits to extend to Ireland in a letter published on Jan. 31st, says the Old Age Pensions and the Insurance Act have laid the basis for the abolition of the Poor-law system in Ireland; and that, in all probability, the decision of the Irish people will be to apply medical benefit in conjunction with a reform of the dispensary system.

The Women's National Health Association and the Insurance Act.

The proposed Irish Health Society under the Insurance Act was brought before a special meeting of the Enniskillen branch of the Women's National Health Association on Jan. 31st, Mrs. E. M. Archdale presiding. After Mr. Alexander Irwin, LL.D., of Coleraine, who had been specially sent, had explained fully the working of the Act, the lady who presided said she would not like to advise anyone to join this proposed Irish Health Society without being able to tell them its advantages over other societies. With one dissentient the committee decided not to undertake as a branch the working up of the Irish Health Society.

Esperanto and Medical Study.

At a meeting of the Dublin University Biological Association last week Mr. G. Jameson Johnston gave an address on the Use of Esperanto in Medical Study. He pointed out that it was not intended as a universal language but merely an auxiliary language. The Provost of Trinity College, who was present, joined in recommending the study to medical students. The next British Esperanto Congress is to be held at Portrush at Whitsuntide.

Association of Fellows of the Royal College of Surgeons.

The annual dinner of the Association of Fellows of the Royal College of Surgeons was held last week at the Dolphin Hotel, Dublin, under the presidency of Lieutenant-Colonel F. G. Adye-Curran, R.A.M.C. (retired). The principal speaker was Mr. Frederick Spicer, of London. Discussing the reasons why more Fellows of the College did not join their association, he said it was due to either ignorance or inability to appreciate the objects for which they had been working. There might be some exception taken to their original founders, and it seemed to be feared that they were a discontented lot of revolutionists, ready to pull down everything in order to get something out of the ruins. On the contrary, they claimed to be equal members of an ancient and honourable College, of whose name they were justly proud and jealous. They were banded to aid and assist the College in every way and to promote her interests. But financially the state of affairs was rotten. Professors were underpaid, and work was starved for want of money. Fellows of the Royal College of Surgeons in Ireland, however eminent they might be, were insulted and flouted in England, and were not eligible for, and were shut out from, surgical appointments in that country, which were kept for a little clique of the Royal College of Surgeons of England. Certain English hospitals made it a condition of appointment that the applicant be a Fellow of the Royal College of Surgeons of England, which debarred the Irish and Scotch diplomates. The Association of Fellows of the Royal College of Surgeons in Ireland protested against such invidious distinctions, and pointed to the fact that some of the most eminent surgeons in England at present were Fellows of the Irish College. The chairman called attention to the National Insurance Act, and expressed the hope that the Government might see its way to introduce during the coming session some sort of an amending Bill which would render it more acceptable to the profession at large. Speeches were also made by Professor J. A. Scott, Mr. Andrew Smith, J.P., Mr. John O'C. Delahoyde, Mr. Andrew Charles, and Mr. Shepherd Boyd.

Health of Belfast.

The report presented to the city council of Belfast on Feb. 1st, regarding the health of that city between Dec. 17th, 1911, and Jan. 13th, 1912, showed that the death-rate from all causes had risen to 17·9, while the zymotic rate was 1·2 and the mortality from chest affections was 5·2. The notifications of all infectious diseases except erysipelas, of which 20 cases were notified, had diminished. There is a marked decrease in the reported cases of scarlet fever and diphtheria. Two cases of typhus fever were also notified.

Infantile Paralysis to be a Notifiable Disease.

At a meeting of the city corporation of Belfast on Feb. 1st it was decided to add infantile paralysis to the list of notifiable diseases.

Forster Green Hospital for Consumption.

At the sixteenth annual meeting of this hospital, held in Belfast on Jan. 31st, the medical report showed that at the beginning of the year there were 49 patients in the hospital, and that 297 were admitted, thus making a total of 346 treated during the year. On an average the patients remained between 10 and 11 weeks in hospital, a period shorter than in former years, chiefly owing to the fact that the corporation patients are admitted for only three months, at the expiration of which they are discharged. The idea of the health committee of Belfast in making the time of residence in hospital so short is to give the benefit of sanatorium treatment to a larger number of consumptives, but in the case of hopeful patients making good progress the time is much too short to ensure a permanent arrest of the disease, and in many such cases the physicians of the Forster Green Hospital report that they have witnessed a relapse of the disease after discharge in cases which might have been permanently cured. During the 12 months the amount received in subscriptions had fallen off, while owing to the increased price of provisions ordinary expenditure had increased, as well as special expenditure in repairing the buildings.

Feb. 6th.

NOTES FROM SOUTH AFRICA.

(FROM OUR OWN CORRESPONDENT.)

The Squatters Bill.

IN connexion with the labour shortage both mine-owners and farmers have been agitating for legislation that will increase the present labour supply in South Africa, and the result of the agitation is now seen in a Government Bill published a few days ago—the Squatters (Native) Bill. At the present time there are many thousands of native families occupying portions of farms and earning a living by tilling the soil and paying rent to the owners. It is true that in many cases exacting landlords demand a rental which renders it well-nigh impossible for the native tenants to subsist, and that a number of other abuses have crept in, but still there is no justification whatever for some of the proposals in the measure, and particularly for the main principle which appears to aim at driving native tenants off the lands into native locations with the object apparently of forcing them to work in the mines or on the farms. In the former case they have to work under the unhealthy conditions of labour prevailing in the gold mines, or in the latter for farmers—who include some of the greatest sweaters of labour in South

Africa. This Bill may drive into pauperisation and misery many thousands of natives, yet it will probably be passed.

White Nurses for Natives.

At a meeting of the board of the Kimberley Hospital the other day the Mayor of Beaconsfield moved a resolution protesting against the employment of European female nurses in wards where male natives are under treatment. Dr. J. E. Mackenzie offered a spirited opposition to the proposal, and made it clear that there was no proof whatever that what is called "the Black Peril" is affected in any way by the professional contact of white nurses with coloured men. He showed, indeed, that the record of this class of crime is all against the idea. The proposal did not find a seconder, and the discussion, owing to Dr. Mackenzie's attitude, quickly fizzled out. Unfortunately, the lay press seems inclined to take the matter up.

Rabies in Rhodesia.

At the present time there is occurring what threatens to be one of the most serious outbreaks of rabies in Rhodesia which the Government of that country has had to face. Since the epidemic some years ago, when the whole country was practically swept by the disease, a few cases have appeared here and there, but confined for the most part to the Victoria district. Now, however, the disease appears to be spreading throughout the adjoining districts. Quite a considerable number of persons have had to be sent to the Government bacteriologist at Salisbury to undergo inoculation after being bitten by dogs which have been proved, or are believed, to have been rabid. The Government Veterinary Department now adopts the plan, upon an outbreak of rabies, of compelling owners of dogs in an infected district to tie their animals up, and the police and private citizens are empowered to shoot on sight any dog found at large. Despite this step, however, the disease appears to be spreading, and if it is to be stamped out more stringent steps will have to be taken.

Whaling on the South African Coast.

During the past two years it has apparently been realised that there is a rich living to be made in connexion with whaling operations on the coast of South Africa, for a number of whaling stations have been established, and numerous applications for fresh sites on which to establish new stations have been made to the Government. Unfortunately, the existing stations have been under no sort of supervision, and most of the structures that have been erected are wooden ones. The process apparently consists in boiling down by steam the whale blubber, bones, and meat. The stations have become saturated with oil and grease and emit a stench that is apparent for miles around. As a result local authorities have opposed most of the recent applications for sites and industrial enterprise is driven away. If it were recognised that a factory, built of reinforced concrete and with a modern automatic plant, could be worked even in the warm climate of South Africa without becoming a nuisance, it is probable that those who are responsible for the antiwhaling movement along the coast would change their attitude and welcome the establishment of the same. It is understood that a modern factory is to be established at Luderitzbucht, in German South-West Africa, and perhaps this will provide the necessary object-lesson.

Death of Mr. H. C. Keilly-Flynn.

Mr. H. C. Keilly-Flynn passed away in Pretoria a few days ago after a short illness. He was generally believed to be a medical man, but as a matter of fact was unqualified, though he had studied medicine in Dublin in 1838. He appears to have been originally appointed surgeon, in the free and easy method prevalent at the time, to the 17th Lancers, and came out to South Africa in that capacity, and on the return of his regiment he relinquished his commission and remained in the country. In 1877 he was in practice in Rustenburg, and hoisted the first Union Jack which proclaimed the annexation of the Transvaal in 1877. In 1881 Mr. Flynn brought this flag into Pretoria, and on August 2nd buried it in the presence of the garrison after a coroner's verdict had been returned of "Death due to a wrong diagnosis of Boer character and general bungling of one man at home." A wooden tablet with an inscription ending with the word "Resurgam" was placed over the grave. When the British troops entered Pretoria on Sept. 25th, 1900, the deceased was elected by the English inhabitants to present an address to Lord Roberts, and the flag was dug up and presented to the colonel of the 21st Lancers. Deceased had at one time many patients, but he was better known for his literary attainments. He was a patriot in the true sense of the term, and suffered for his patriotism. The news of his death has been received with genuine regret by a host of friends and by many erstwhile enemies, who have come to realise the sterling worth of his somewhat rugged character.

A Sanatorium for Miners' Phthisis.

The sanatorium for miners suffering from miners' phthisis, which has been erected at a cost of £52,000 at Modderfontein, was opened recently by the Administrator of the Transvaal. The sanatorium is a two-storeyed building, built in the shape of a crescent, facing north. There are four six-bedded wards on each floor and a number of smaller wards. The buildings are admirably suited for the purpose for which they are intended to be used, but it should have been possible for more accommodation to be provided for the money. The medical superintendent is Dr. J. C. Mitchell, late Government bacteriologist and pathologist of the Transvaal.

South African Medical Congress, 1912.

The preliminary arrangements have been completed for the next South African Medical Congress, which is to be held in Johannesburg during Easter week next. An entertainment committee is busily engaged in arranging a programme of entertainments, but it is sincerely to be hoped that festivities will not be permitted, as is so often the case at these gatherings, to interfere with the real business of the Congress.

Dec. 27th, 1911.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Sanitary Administration in Bengal.

FROM the report of the Sanitary Commissioner for the Province of Bengal we learn that in 1910 the birth-rate was 39·72 per 1000, an increase of 1·93 over the rate for the previous year, due to an improvement in the health of the population and a greater abundance of food-supply. The death-rate, however, was also higher, 33·10 compared with 30·55 per 1000, owing to the prevalence of cholera and plague. These ratios are based on the figures of the 1901 Census—viz., 50,521,604. According to the 1911 Census the population amounted to 52,457,011, but the figures are not yet available for statistical calculations.

Among the populations of India there is a natural increase in their numbers with favouring conditions of the food-supply and of health, which under the peaceful Government of the British *raj* would soon produce a state of overcrowding were it not for occasional epidemic visitations. Bengal, however, has by no means the most prolific population, as in the Central Provinces the birth-rate was as high as 55·42 per 1000, the highest recorded during the last 30 years, and the result of a healthy and prosperous season in 1909. In the United Kingdom the years are nowadays always healthy and prosperous in regard to essentials, yet the birth-rate has fallen to 25 per 1000 in 1910. The statistical figures indicate the point of view of the people; the poorest Bengali considers it a disgrace not to have a family, and has no anxiety as to its maintenance after the period of childhood, a matter which he entrusts to Providence and the Government.

The higher mortality in Bengal during 1910 was due to the prevalence of fever, cholera, and plague in some districts. The town of Jamalpur had a death-rate of 62·82 per 1000, 41 per 1000 being due to these three diseases. Monghyr lost 60·53 per 1000, the deaths from plague amounting to the very high proportion of 28·51. Throughout the province generally the agricultural out-turn was satisfactory, food was cheap, and a further rise in the birth-rate may be expected. Cholera prevailed throughout the province in 1910, especially in Bihar, the death-rate from this cause being 3·21 for Bengal as a whole, and 9·15 for the district of Shahabad. Patna and Muzaffarpur suffered nearly as badly; deficiency of proper water-supply and fouling of surface wells are the principal causes. Treatment of the wells with permanganate of potash is getting to be adopted and appreciated. The death-rate from small-pox showed a great decrease, the mortality

being only 0·14 per 1000, compared with 0·52 for the preceding five-year average. There was, unfortunately, an increase in plague, which caused 46,584 deaths, or a mortality of 0·92 per 1000, compared with 0·23 in the previous year. This increase was chiefly due to a limited prevalence in the Tirhut and Patna divisions, the rest of the province suffering but slightly. Evacuation is stated to have been the most popular means of prevention, disinfection and rat destruction being also carried out. The heading of fevers accounts for more deaths than all other causes put together—namely, 20·42 out of a total mortality of 33·10; this was, however, the lowest ratio for many years past, and well below the quinquennial mean of 22·79. A special malarial committee has been constituted to deal with the problems connected with fever prevalence in the province, and a medical officer and assistant surgeon have been selected to make a particular study of the subject.

Sanitary works in the way of improved water-supplies and drainage schemes are being carried out as funds permit. It is very satisfactory to learn that septic tank installations have proved a success; it is stated that these sanitary appliances are extremely efficient and, speaking generally, very well looked after. This excellent result is, no doubt, largely due to the good work that has been done in this branch of sanitary science by Major W. W. Clemesha, I.M.S., the Sanitary Commissioner, who has made it his especial study, and who is to be congratulated on the issue of this, his first, annual report.

Plague in India.

The plague statistics for the whole of British India for the week ending Dec. 23rd last show 8643 seizures, resulting in 7189 deaths. The provincial figures were: Bombay, 1886 deaths; Madras, 261; Bengal, 329; the United Provinces, 1934; the Punjab, 37; Burma, 41; and the Central Provinces, 830. There were 317 fatal cases in Mysore, 1504 in Hyderabad, and 44 in Rajputana. No cases of plague occurred in Eastern Bengal, Assam, or the North-Western Frontier Province. For the week ending Dec. 30th there were 9932 seizures and 7903 deaths from plague in all India, of which Bombay returned 1816 deaths; Madras, 302; Bengal, 947; the United Provinces, 1798; the Punjab, 141; Burma, 31; the Central Provinces, 822; Central India, 312; Mysore, 299; Hyderabad, 1378; and Rajputana, 50. No cases occurred in Eastern Bengal, Assam, the North-Western Frontier Province, or Baluchistan.

St. John Ambulance Association at the Durbar.

His Majesty the King Emperor has been pleased to bestow his Coronation Durbar medal on Major R. J. Blackham, R.A.M.C., in recognition of special services at the Coronation Durbar at Delhi. Major Blackham was commandant of a Coronation Durbar Contingent of the St. John Ambulance Brigade, consisting of nearly one hundred of all ranks, which served at Delhi throughout the Durbar period—i.e., nearly a fortnight. The contingent was well equipped in every respect and had the following transport establishment—viz., 3 transport carts, 15 ambulance carts, 36 transport ponies, and 30 riding ponies, specially provided for the occasion by His Highness the Maharaja of Jaipur. The St. John men were officially recognised by the Durbar authorities and were attached to the Civil Ambulances, under the command of Colonel C. J. Bamber, C.V.O., I.M.S. They rendered valuable services to many hundreds of cases and were fortunate enough to be on the scene at the only two serious accidents which occurred in the immediate vicinity of Their Majesties. This is the first occasion on which voluntary ambulance workers have been officially employed in India.

Jan. 10th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Health of Queensland.

THE annual report of the Government statistician for Queensland states that the total population on Dec. 31st, 1910, was 599,131. The general prosperity of the past few years was reflected in the marriage-rate, which was the highest for 30 years. The recent State-aided immigration probably contributed to raise the rate. The birth-rate, 27·3, was satisfactory, and illegitimacy shows no increasing ratio, although Queensland and New South Wales show higher rates in this respect than the southern States. The infant mortality figure was the lowest on record. The deaths from phthisis totalled 308, and 75 per cent. of the victims had lived 20 years or over in Queensland. The most common cause of death was organic heart disease, and tuberculosis ranks fourth, the second place being occupied by cancer. The report shows clearly that the Queensland climate has nothing about it to preclude the well-being of a white population, and its mineral and pastoral resources are unbounded. Unquestionably it will be the treasure-house of the Australian continent when its millions of acres are populated.

Venereal Prophylaxis.

Practical measures for the limitation of spread of venereal disease in Victoria are slow in taking shape, although some stir was recently made by the press and the medical profession. An advisory committee was nominated to assist the Government in introducing legislation, but so far nothing has been forthcoming. It was recently announced that this committee had secured lock wards at the Alfred and the Women's Hospitals, but this is now denied. The Minister for Public Health recently stated that the Government were anxious and willing to do anything in reason and that the matter must not be allowed to drop.

State Purchase of Radium.

The acting State Premier of Victoria recently asked the President of the Victoria Branch of the British Medical Association to report upon the advisability of a State purchase of radium, for use either at hospitals or on loan. An expression of opinion was asked from the honorary staffs of the Melbourne, St. Vincent's, Alfred, Women's, Children's, and Eye and Ear hospitals, and they have, through representatives, signed a joint report. In this they point out that radium is still on trial, and that so far as is known its curative power has not been established in any deep-seated disease. It is stated that certain superficial skin affections are curable by radium and that some forms of epithelioma have apparently been cured. The report advises against any large purchase of radium, but suggests that comparatively small amounts (worth, say £1000) might be kept at one or more hospitals for special cases. The report considers that the establishment of a radium bank for loan of specimens would be a great mistake and open to grave abuses.

Weather in Victoria.

The present year in Melbourne is the wettest on record. The rainfall to date (Dec. 23rd) is 37 inches, which is nearly double the average. The total in 1908 over the same period was 17·8 inches. The highest figures are 40 inches recorded in 1840, but there is some question of their accuracy. No particular detriment to the public health is so far observable as a result of the heavy rainfall.

Medical Practitioners Bill.

The medical profession of Queensland are at variance with the Government over some new legislation affecting the registration of medical men in that State. The Government insists on including provisions for registering herbalists and hydropathists, and recognising opticians. The members of the Queensland Medical Board have stated that if the Bill is passed in its present form they will at once resign their positions. One very remarkable clause in the Bill is as follows:—

> But no person shall be deemed to practise medicine or surgery who attempts or endeavours to cure or heal the sick or to restore others to health by prayers, faith, or religious methods, or by mental treatment, provided that no drug, medicine, or instrument is thereby prescribed or used whether directly or indirectly or whether internally or externally.

Health Act.

The Queensland Government has introduced a Bill giving much wider powers to the Board of Public Health and providing for the registration of nurses by the State.

Complimentary Dinner.

A complimentary dinner was tendered to Dr. F. Antill Pockley by a number of colleagues on Nov. 30th at the University Club, Sydney. The chair was taken by Sir Philip Sydney Jones, and the occasion was to mark the appreciation of the manner in which Dr. Pockley had directed the affairs

of the Ninth Australasian Medical Congress in his capacity of President.

Personal Items.

Dr. J. F. Wilkinson has been elected President of the Victorian Branch of the British Medical Association for 1912.—Dr. Judah Iona, who is an assistant demonstrator of physiology in the University of Melbourne, has been awarded a research scholarship of £250 for three years at the London University for his work on the toxins of puerperal infection. Dr. Iona has done some original work on the effect of adrenalin in delaying the action of certain poisons.—Professor H. B. Allen, dean of the faculty of medicine in Melbourne University, will leave for London early in January and will be absent for a year.

Dec. 27th, 1911.

Obituary.

JAMES SNOWDEN-SMITH, L.R.C.P. & L.M. EDIN., M.R.C.S. ENG.

HONORARY SURGEON TO THE TAVISTOCK (DEVON) COTTAGE HOSPITAL.

Mr. J. Snowden-Smith died suddenly on Jan. 30th, from syncope, whilst going over Portland Convict Prison with Captain Johnstone, deputy-governor of the prison, with whom he was staying on a visit for the benefit of his health. The deceased, who was 57 years of age, received his medical education at Guy's Hospital, London, and qualified M.R.C.S. Eng. in 1880; the year following he was admitted L.R.C.P. of Edinburgh. After holding the post of house surgeon at the Salisbury General Infirmary, he went to Tavistock, succeeding to the practice of the late Mr. Gilbert Northey. He soon became very popular in Tavistock and had an extensive connexion. He was honorary surgeon to the local cottage hospital, certifying factory surgeon, district and workhouse medical officer, and public vaccinator. He was held in high esteem at Tavistock, where he had practised for over 20 years, and much sympathy is felt there for his widow, daughter, and son, Lieutenant Snowden-Smith, who has done good work as an army aviator. The funeral, which took place at Tavistock, was largely attended.

ALLEN ABRAHAM DUKE, M.D. EDIN., L.R.C.S. & L.M. EDIN., L.S.A. LOND.

THE death occurred at Southwick, Sussex, on Jan. 30th, of Dr. Allen Abraham Duke, who formerly was a well-known Brighton medical practitioner. Seventy-five years of age, he had resided practically in retirement at Southwick for some years. Studying at the University of Edinburgh, he took the L.R.C.S. and L.M. diplomas as far back as 1858, and that of L.S.A. in London in the same year. He became Doctor of Medicine of the University of Edinburgh in 1859. For some time he was a surgeon in the Peninsular and Oriental Steam Navigation Company's service, assistant surgeon at H.M. Convict Prison at Portsmouth, and surgeon at the North Surrey Schools, Anerley.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Max Salomon, of Berlin, whose labours in the cause of obtaining sea-coast hospitals for consumptive cases, together with his frequent publications on the question of combating tuberculosis, have done great service, especially to the German working classes. He was in early professional life a military surgeon and served in the Franco-German war. Afterwards he practised in Hamburg and later in Berlin. He was much interested in the history of medicine, and published some 40 years ago a "History of Glycosuria." His manual of "Special Internal Therapeutics," too, went through three editions, and was translated into Italian. He was 74 years of age.—Dr. Theodor Piderit, of Detmold, author of a well-known work on mimicry, practised for several years in Valparaiso, Chili, but after his return to Germany gave himself up to literary work and teaching. He was 86 years of age.—Dr. Don Jose Maria Esquerdo, an eminent Spanish alienist physician and politician. He was several times elected Member of Parliament for Madrid.

THE NATIONAL INSURANCE ACT.

OUR correspondents in Scotland, Ireland, and Newcastle detail the present position of affairs in their localities.

THE WELSH MEDICAL COUNCIL.

The proposal to form a Welsh Medical Committee or Council to organise and conduct future discussions as to medical benefit under the Insurance Act with the Welsh Commissioners has met with general approval in Wales. At a meeting of the South Wales and Monmouthshire Branch of the British Medical Association on Feb. 2nd a resolution was unanimously passed in favour of constituting for Wales and Monmouthshire a Welsh Medical Council representing both members and non-members of the Association for the purpose indicated. It was further resolved that no offer from the Welsh Commissioners should be accepted until after the Representative meeting of the British Medical Association in London on Feb. 20th and 21st. In consequence of the approval with which the proposal has been received it has been resolved to postpone the meeting at Shrewsbury arranged for Friday, Feb. 9th, until Thursday, Feb. 15th, so as to allow time for the divisions in Wales and Monmouthshire to meet to discuss the resolutions it is proposed to submit to the Shrewsbury meeting, and to elect delegates to attend it. It has been suggested to officers of divisions that eligible non-members should be invited to the division meetings so as to ensure unanimity in the profession throughout Wales and Monmouthshire. The resolutions to be submitted to the Shrewsbury meeting, which will assemble at the Raven Hotel in that city at 2 P.M. on Thursday next, Feb. 15th, will include the reaffirmation of the six cardinal principles, and the appointment of a Welsh Medical Committee or Council to convey to the Board of Insurance Commissioners in Wales the decisions of the medical profession. The postponement of the Shrewsbury meeting has been rendered possible by the very general approval of the course proposed to be taken, which has done away with the necessity of holding the suggested preliminary meeting on Feb. 9th. The meeting on Feb. 15th will, it is anticipated, be able at once to proceed to the constitution of the Committee for Wales and Monmouthshire, and the election of an Executive Committee.

THE REFORM COMMITTEE'S PROPOSAL FOR AN AMENDING ACT.

Mr. Percy C. Raiment, honorary secretary of the British Medical Association Reform Committee, has forwarded to us the following copy of the principal headings of the Bill to Amend the National Insurance Act, 1911, which is being prepared by counsel for that committee. He wishes it to be understood that the points given only embody the barest outlines of the Reform Committee's proposals, and are necessarily incomplete as to details. The broad principles underlying the "Six Point Programme" have been loyally adhered to.

Principal Headings of Proposed Bill to Amend the National Insurance Act, 1911, now in preparation by the British Medical Association Reform Committee.

1. No person with income exceeding £104 per annum to be entitled to medical benefit under the Act.
2. No person with income not exceeding £65 per annum to be excluded from medical benefit under the Act.
3. Local Medical Committees to be constituted in every administrative area with administrative powers.
4. The Local Medical Committee instead of the Insurance Committee to be the authority under Section 15 (3) for fixing and varying the income limit within the above-mentioned amounts.
5. Statutory minimum capitation fee of 10*s.* per insured person per annum, or at the option of the Local Medical Committee, an equivalent minimum payment per visit and consultation.
6. The representatives of medical practitioners to be elected under Section 59 (2) (c) of the Act to be not less than one-sixth of the whole number of members of each Insurance Committee.
7. No person suffering from any injury or disease in respect of which compensation or damages may be payable or recoverable under any statute or at common law or who is deprived of sick benefit for misconduct under Section 14 (4) of the Act to be entitled to medical benefit under the Act.
8. The General Medical Council to be substituted for the Insurance Commissioners for the purpose of removing a medical practitioner from the panel under Section 15 (2) (*b*) of the Act.

THE NATIONAL MEDICAL UNION.

The executive of the National Medical Union met in Manchester on Feb. 6th to discuss the Insurance Act, and passed four resolutions, copies of which have been forwarded to each division of the British Medical Association.

The first was a vote of censure on the Council of the Association and a demand for its resignation. The second was a refusal to accept the report of the Council, because it does not embody insistence upon the six cardinal points being guaranteed by statute. The third was a renewal of the pledge not to go on any panel or medical committee until the six cardinal points are unreservedly conceded in such a manner that they cannot be altered or withdrawn in future, except by Act of Parliament. The fourth resolution recommended each division of the British Medical Association to instruct the Council not to enter into further negotiations with, or hold further interviews with, the Committee of the Insurance Commissioners. The various divisions of the Association are urged by the National Medical Union to support the above policy, and to instruct their Representatives to vote in accordance with it at the Representative meeting on Feb. 20th and 21st.

A SPECIAL MEETING OF THE CARDIFF MEDICAL SOCIETY.

A SPECIAL meeting of the Cardiff Medical Society was held on Tuesday, Jan. 16th, Mr. H. E. SKYRME, the President, being in the chair. There were considerably over 100 members and medical friends present.

The PRESIDENT, with a few remarks, introduced Dr. T. A. HELME, of Manchester, who gave his address. This consisted of a detailed justification of his own attitude towards the British Medical Association during the past 12 years. He refuted the charges of inconsistency and hostility to the Association which had been raised against him, and made a long and searching criticism of the policy pursued by the leaders of the Association in the matter of the National Insurance scheme. Dr. Helme retraced the course of the negotiations between the Executive of the Association and the Government, and condemned in detail the behaviour of the Council both towards the scheme and towards their constituencies. As Dr. E. J. Maclean, chairman of Representative meetings, was present, Dr. Helme felt at liberty to speak openly on these matters and to press home various damaging points in recent history. His concluding words were as follows: Now is the time to act. The National Insurance Act must be so amended as to secure the six cardinal points, either by an amending Act or possibly by regulations on the part of the Commissioners, regulations which shall secure unreservedly and permanently our cardinal points and which shall be alterable only by Act of Parliament or by regulations issued with the expressed consent of the profession. Our present position, then, is that we are dissatisfied with the weakness of the attitude of the officials of the British Medical Association, and we think the time has arrived for firmer and stronger action.

After a vote of thanks to the speaker, the following resolution was moved by Dr. W. MITCHELL STEVENS and seconded by Mr. E. TENISON COLLINS:—

That in the opinion of this meeting the National Insurance Act does not meet the just demands of the medical profession as formulated in the six cardinal points; that it is detrimental to the public interest; and that the situation thus created can only be adequately met by a refusal on the part of the profession to undertake any duties which the Act proposes to assign to its members.

Dr. MACLEAN then addressed the meeting. He avoided for the most part the personal indictment and allegations of Dr. Helme, confining himself to the broader aspects of the resolution before the meeting. He suggested that the proper tribunal for trying the issues raised by Dr. Helme was the forthcoming Representative meeting. He deplored the ventilation of such matters in such a manner as fatal to the interests of the profession. He strongly advised the meeting not to take up the line indicated by the resolution. The result of that course being followed would be that the regulations of the Commissioners would be formed irrespective of the policy of the profession. Dr. Maclean characterised this course as foolish, ridiculous, and mischievous, and insisted that the profession should band itself together to present its case to the Commissioners, the committees, and the public, and continue up to the point of refusing to form a panel unless its conditions were fulfilled.

An amendment was proposed by Dr. W. B. CRAWFORD TREASURE, seconded by Dr. LLEWELLYN, as follows:—

That the National Insurance Act does not meet the just demands of the medical profession as formulated in the six cardinal points of policy, and that in the opinion of this meeting no member of the profession shall undertake the treatment of insured persons until the six cardinal points have been conceded,

After Dr. W. E. THOMAS, Dr. T. H. MORRIS, Mr. W. J. GREER, Dr. MARTIN, and Dr. D. A. PATERSON had taken part in a discussion the amendment was put to the meeting and lost, and the original resolution was then carried. Only members of the society took part in the vote.

THE LONDON HOSPITALS AND THE ACT.

A meeting of chairmen of the metropolitan hospitals to which medical schools are affiliated, convened by Mr. Sydney Holland, took place on Friday, Feb. 2nd, when the conclusion was arrived at that for the present no change should be recommended in the admission of either in- or out-patients or in the supply of materials for treatment. It was resolved:—

That a committee be formed of the secretaries of the following hospitals:—The London, St. Bartholomew's, Guy's, St. Thomas's, the Middlesex, and the Seamen's (Greenwich), to collect information during the year and to report to a further meeting to be then held.

It is expected that the hospitals will come to some general agreement as to payments from insured patients or approved societies; and it was decided that steps should be taken to explain to subscribers that the Act did not propose to help patients needing serious operations, lengthy nursing, or special treatment, so that the claims on the voluntary hospitals would remain as great as before.

THE NATIONAL INSURANCE ACT AND THE MEDICAL PROFESSION.

A correspondent has sent us the following tabulated list of clauses in the Act affecting the medical profession:—

Section.	
1	Those entitled to insure.
Schedule 1, part 2 ...	Those not entitled to insure.
8 (1) (*a*)	Medical benefits, definition of.
14 (1) and 15...	,, ,, administration of.
15 (6) and 42 (*d*)	,, ,, original grants for.
15 (7)	,, ,, supplementary grants for.
15 (6) and 42 (*e*)... ...	,, ,, administrative expenses of.
8 (8) (*a*)	,, ,, commencement of.
10 (1)	,, ,, suspension of.
Schedule 4, part 2 ...	,, ,, extension of.
8 (1) (*b*)	Sanatorium benefits, definition of.
16	,, ,, administration of.
16 (2) and 42 (*c*)	,, ,, original grants for.
61 (3) and 64 (1)	,, ,, supplementary grants for.
61 (2)	,, ,, administrative expenses of.
10 (1)	,, ,, suspension of.
17 (1)	,, ,, extension of.
14 (4)	Suspension from certain benefits because of misconduct.
37 (1) (*a*)	Additional benefits.
Schedule 4, Part 2.	
11	Compensation claims.
8 (1) (*e*)	Maternity benefits, definition of.
20	,, ,, re-insurance of.
18 (1)	,, ,, administration of.
18 (1)	,, ,, call on advice of midwife
19	,, ,, duty of husband.
46 (2) (*ff*)	State medical services (Naval, Marine, and Army).
46 (3) (*h*)...	State medical services, Sea Fishing Service.
48 (12)	Charitable medical service, contributions to hospitals.
12	(*a*) by insured persons.
21	(*b*) by approved societies.
21	(*c*) by insurance committees.
51	Charitable medical service, institutions and homes.
21	Charitable medical service, dispensaries.
60 (1) (*b*)	,, ,, ,, lectures on health.
21	Nurses for insured persons (district; specially appointed).
45 (1) (*d*)...	Aliens.
69 (1); 71	False declarations by insured persons.
57 (1); 80 (1); 81 (1); 82 (1); 83 (1)	Machinery for conduct of Act—Commissioners.
58	,, ,, ,, Advisory Committees.
59	,, ,, ,, Insurance Committees.
62	,, ,, ,, Local Health Committees.
65; 78	Amendment of Act.

Our correspondent has been officially engaged in working upon the Act, and his indication where to find particular things in a complicated document may be of service.

THE IMPERIAL MEDICAL REFORM UNION.

A special meeting of the council of the Imperial Medical Reform Union was held on Thursday, Feb. 1st, to consider an

invitation from the National Health Insurance Commissioners to appoint two delegates to attend the conference convened for Friday, Feb. 2nd. There was a full attendance of members, the president, Mr. M. C. Corner, being in the chair. Mr. George Brown, general secretary, said that he had just received a telegram from the National Health Insurance Joint Committee stating that the proposed conference had been postponed. He presumed that the postponement was due to the refusal of the Royal College of Physicians of London and other medical corporations to take part in the conference. Hence it would not be necessary to appoint delegates. The council could, however, if deemed desirable, nominate two delegates to represent the union should a conference be convened before the next ordinary meeting of the council. After some discussion it was unanimously resolved, on the motion of Dr. J. B. Cook, that at present no action be taken which might in any way be regarded as antagonistic to any other representative medical organisation.

Medical News.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—At a meeting of the Comitia of the Royal College of Physicians of London on Jan. 25th and of the Council of the Royal College of Surgeons of England on Feb. 1st Diplomas of L.R.C.P. and M.R.C.S. were respectively conferred upon the undermentioned candidates, who have passed the Final Examination of the Conjoint Examining Board and have complied with the necessary by-laws:—

Thomas Stevens Allen, Guy's Hospital; Soliman Azmy, Cairo and University College Hospital; George Victor Bakewell, B.A. Cantab., Cambridge University and London Hospital; *Grantley Barratt, London Hospital; Dougan Bird, M.B., B.S. Melb., Melbourne University and St. Mary's Hospital; Claude Hebden Barker Booth, Cambridge University and London Hospital; Arthur Vincent Boyall, B.A. Cantab., Cambridge University and Charing Cross Hospital; Terence Campbell Butler, King's College and Westminster Hospital; Colin Guy Hirst Campbell, Cambridge University and Westminster Hospital; Arthur Barrett Cardew, Middlesex Hospital; Eric Edmund Chipp, St. Bartholomew's Hospital; Thomas Clarke, Leeds University; Hugh Gregan Crawford, Guy's Hospital; Campbell William de Morgan, St. Mary's Hospital; George de Swietochowski, M.D. Munich, Munich University and London Hospital; Edward Percy Drabble, London Hospital; Christopher Robson Dudgeon, King's College and Westminster Hospital; Norman Duggan, M.B., Ch.B. Manch., Manchester University and St. Bartholomew's Hospital; Philip Vanner Early, University College Hospital; Macormack Charles Farrell Essmon, St. Mary's Hospital; Wilfred Marlow Ecclestone, M.B. Toronto, Toronto University and University College Hospital; Gordon Ernest Dormer Ellis, St. Bartholomew's Hospital; Abel Evans, University College, Cardiff, and Charing Cross Hospital; Arthur Geoffrey Evans, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; David Benjamin Evans, University College, Cardiff, and St. Bartholomew's Hospital; George Arthur Ewart, B.A. Cantab., St. George's Hospital; Ibrahim Fahmy-Elminyawi, Cairo and University College Hospital; Montague Albert Farr, Charing Cross Hospital; Archibald Ferguson, St. Bartholomew's Hospital; Charles Michael Forster, B.A. Cantab., Cambridge University and Charing Cross Hospital; Andrew Alexander Fyffe, Sheffield University and University College Hospital; Alfred Linton Gardner, Guy's Hospital; George Herbert Garlick and John Torbet Smith Gibson, St. Mary's Hospital; Cyril Ernest Ambrose Goddard and Thomas Chivers Graves, M.R.C.V.S., B.Sc. Lond., University College Hospital; John Cecil Hallinan, Charing Cross Hospital; Ernest Ravensworth Hart, Guy's Hospital; Sidney Martin Hattersley, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Gordon Victor Hobbs, St. Mary's Hospital; Robert Hamer Hodges, King's College Hospital; Bernard Whitchurch Howell, St. Bartholomew's Hospital; Frederick James Humphrys, St. Thomas's Hospital; Reuben Levi Hurst, M.B. Toronto, Toronto University, University College and Middlesex Hospitals; Christopher Martin Ingoldby, London Hospital; Howel Gabriel Gwyn Jeffreys, B.A. Cantab., Cambridge University and St. George's Hospital; Nagubai Moreshwar Joshi, L.M.S. Bombay, Bombay University and Royal Free Hospital; Bhagat Ram Khanna, Punjab University and London Hospital; Leon Levene and Robert Henry Liscombe, University College Hospital; *Ernest Millington Livesey, M.B., Ch.B. Otago, Otago University; Andrew Carey McAllister, King's College Hospital; Maurice Mackenzie, London Hospital; Avenell Frederick Cleeve Martyn, St. Mary's Hospital; Philip Henry Mitchiner, St. Thomas's Hospital; Kavasji Cursetji Mulla-Feroze, L.M.S. Bombay, Bombay University and London Hospital; Francis Leslie Nash-Wortham, St. Bartholomew's Hospital; Percy Alfred Newton, M.B., Ch.B. Birm., Birmingham University; Burford Noel Norman, University College Hospital; William David Owen and Donovan Blaise Pascall, St. Bartholomew's Hospital; William Baly Peacock, L.D.S. Eng., King's College Hospital; George Harold Pearson, London Hospital; John Hawkes Pendered, B.A. Cantab., and Walter Sydney Perrin, M.A. Cantab., Cambridge University and London Hospital; Reginald Arthur Pittard, University College, Cardiff and London Hospital; John McFarlane William Pollard, Guy's Hospital; Herbert Barrett Pope, B.A. Cantab., Cambridge and Leeds Universities; George Lionel Preston, Guy's Hospital; Arthur Joseph Rae, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Peter Warwick Ransom, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Richard Bancroft Nevil Reade, St. Mary's Hospital; Evan David Richards, University College, Cardiff, and St. Bartholomew's Hospital; Edmund Uniacke Russell, King's College Hospital; Reginald Sherman, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Frederic Batttinson Smith, B.A. Cantab., Cambridge University and University College Hospital; Philip Smith, Guy's Hospital; Henry Kenneth Victor Soltau, St. Bartholomew's Hospital; Geoffrey Sparrow, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; James Lennox Stewart, Guy's Hospital; Claude William Treherne, St. Thomas's Hospital; Henri Rene Guillaume Van der Beken, London Hospital; Victor Vesselovsky, St. Thomas's Hospital; Ronald Herbert Vicary, Cambridge University and St. Mary's Hospital; Victor David Collins Wakeford, St. Bartholomew's Hospital; Lionel Charles Watkins-Baker, Bristol University; Arthur John Waugh, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Ernest White, L.D.S. Eng., Guy's Hospital and Sheffield University; Cyril Guy Whorlow, St. Thomas's Hospital; James Buckley Aquilla Wigmore, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Robert Waller Willcocks, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; John Winterbotham, B.A. Cantab., Cambridge University and University College Hospital; and Percy Arthur With, St. Bartholomew's Hospital.

* M.R.C.S. Diploma previously conferred.

Diplomas in Public Health were also conferred (in conjunction with the Royal College of Surgeons) upon the following 18 candidates:—

Arthur George Atkinson, M.B., B.C. Cantab., L.R.C.P., M.R.C.S., St. George's Hospital; Robert Vickers Clayton, M.B., B.S. Durh., Durham University and Portsmouth Municipal College; Francis Gerrard Hamilton Cooke, L.R.C.P., M.R.C.S., L.S.A., University College; Maneckjee Merwanjee Cowasjee, L.R.C.P., M.R.C.S., Guy's Hospital and Royal Institute of Public Health; Frank Elton Cox, M.B., B.S. Melb., L.R.C.P., M.R.C.S., Melbourne University and St. Bartholomew's Hospital; George Henry Dupont, M.D., Ch.B. Edin., Edinburgh University and University College; Josephine Letitia Denny Fairfield, M.D., Ch.B., Edin., Edinburgh University and University College; William Miller Fairlie, M.B., Ch.B. Glasg., University College; William Robert Gibson, L.R.C.P., F.R.C.S., Guy's Hospital and King's College; John Andrew Hagerty, M.B., Ch.B. Glasg., Glasgow University; George Crichton Jackson, M.B., B.C. Cantab., L.S.A., Cambridge University, St. Mary's and St. George's Hospitals; Satyaranjan Maitra, L.M.S. Calcutta, Calcutta Medical College and Middlesex Hospital; Manmatha Nath Mitra, L.M.S. Punjab, Punjab University and University College; John George Owen, L.R.C.P., M.R.C.S., King's College; Henry Christian Ernest Quin, L.R.C.P. & S. Edin., L.F.P.S. Glasg., University College; Jessie Anne Scott, M.B., Ch.B. Edin., Edinburgh University and University College; Frederick Meadows Turner, M.D., B.C. Cantab., Cambridge University and Guy's Hospital; and Arthur Christopher Watkin, L.R.C.P., M.R.C.S., University College.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—Licences in Dental Surgery have been conferred upon the following gentlemen, who have complied with the necessary by-laws:—

William Reginald Brandon, Manchester University; and Sidney William Ingram, Guy's Hospital.

FOREIGN UNIVERSITY INTELLIGENCE.—*Albany:* Dr. Elting has been appointed Professor of Surgery.—*Indianapolis (Medical College of Indiana):* Dr. Willis D. Gatch, of Baltimore, has been appointed Professor of Surgery.—*Montreal (McGill University):* Dr. Donald T. MacTaggart has been appointed Professor of Forensic Medicine.—*Naples:* Dr. G. Severino has been recognised as *privat-docent* of Medical Pathology.—*Odessa:* Dr. Uskoff has been appointed Professor of Medical Pathology and Therapeutics.—*Palermo:* Dr. A. Zancia has been recognised as *privat-docent* of Otology and Laryngology.—*Pisa:* Dr. Marcantoni has been recognised as *privat-docent* of Medical Pathology.—*Prague (Bohemian University):* Dr. R. Kimler has been promoted to be Ordinary Professor of Pathological Anatomy.

CENTRAL MIDWIVES BOARD.—A special meeting of the Central Midwives Board was held on Jan. 26th at Caxton House, Westminster, with Sir Francis H. Champneys in the chair. The Board considered the following charges, amongst others, against the midwives whose names are given below, and ordered them to be struck off the Roll:—Mary Ann Carr, that while herself in a condition liable to be a source of infection, owing to a discharging whitlow on the thumb, she attended as a midwife at a confinement and delivered the patient of a child, contrary to the provisions of Rule E, 5. Ellen Gaskell, that being in attendance as a midwife at a confinement, the case being one of abortion, she did not explain that it was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband

or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 19. Ellen Gould, that being in attendance as a midwife at a confinement she failed to adopt the antiseptic precautions required by Rules E, 3 and 7, and having been sent for on account of the illness of the patient, and advising that a registered medical practitioner should be sent for, she did not hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 19. Elizabeth Hodgkinson, that being in attendance as a midwife at a confinement, the child's right eye being inflamed and discharging on August 13th, and the left eye being similarly affected on August 15th, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 20 (5). Ann Hole, that when attending to her patients she did not wear a clean dress of washable material as required by Rule E, 1, did not adopt antiseptic precautions, could not read a clinical thermometer, and that she did not keep a register of cases as required by Rule E, 23. Florence Matilda Magor, that being in attendance as a midwife at three successive confinements, the child in each case suffering from inflammation of, and discharge from, the eyes, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 19 (5) of the rules then in force. Margaret Morgan, that she was not cleanly in her person and house, as required by Rule E, 1, and that she did not comply with Rule E, 13, being unable to use a clinical thermometer. Marie Ozun, that on Sept. 11th, 1911, she was convicted at the Lowestoft petty sessions of feloniously stealing 31 canvas deck chair seats, and was thereupon sentenced to a fine of 4 guineas with costs, or in default one month's imprisonment. Emily Susannah Plumb, that being in attendance as a midwife at a confinement, the patient suffering from excessive bleeding, she did not explain that the case was one in which the attendance of a registered medical practitioner was required, nor did she hand to the husband or the nearest relative or friend present the form of sending for medical help, properly filled up and signed by her, in order that this might be immediately forwarded to the medical practitioner, as required by Rule E, 20 (3). Sarah Reed, that being in attendance as a midwife at a confinement, she did not adopt the antiseptic precautions required by Rules E, 3 and 7, and she did not take the patient's temperature at any time. The following midwives were censured after charges against them had been considered: Mary Jane Haines and Eliza Mercer. Grace Lingard and Mary O'Callaghan were cautioned after charges against them had been considered.

DONATIONS AND BEQUESTS.—The late Mr. Montague G. Jessett has left the residue of his property, after making certain bequests, to King Edward's Hospital Fund. It is expected that the residue will amount to about £40,000. The secretaries of King Edward's Hospital Fund have received an annual subscription of £5000 from Mr. Walter Morrison and £1000 from Mr. W. Waldorf Astor. —Several generous bequests to the Leicester Infirmary are announced. The principal one arises under the will of the late Mr. Alfred Adderly, J.P., of Woodhouse Grange, Leicester. After bequeathing several legacies and an annuity to his niece, Mr. Adderly bequeaths the whole of his estate to his wife for life, upon her death to his daughter for life, and subject thereto he bequeaths the whole upon trust for the Leicester General Infirmary. It is estimated that the infirmary may eventually receive a sum of about £30,000 under this bequest. Mr. Adderly was a life governor of the infirmary and a generous contributor to the fund for the reconstruction of the infirmary. A second legacy arises under the will of the late Mrs. Ellen Dyke Frost, whereby the infirmary has received £1000 for the general fund and £1000 for the children's hospital. A third bequest is under the will of the late Mr. Charles Turner, who died some four or five years ago, and from whose estate a sum of £1400 has already been received. The estate has now been finally wound up and a further sum of £933 8*s.* 1*d.* (being two-thirds of the residue) has been paid by the executors to the infirmary.

THE MORISON LECTURES OF THE ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—These lectures on Certain Aspects of Ataxia will be delivered by Dr. J. J. Graham Brown on Monday, Wednesday, and Friday, March 4th, 6th, and 8th, at 5 o'clock.

BRIGHTON WORKHOUSE AND AN OPERATING SURGEON.—The decision of the Brighton guardians to appoint a consulting and operating surgeon to the workhouse at an honorarium of 50 guineas per annum having been found distasteful to the local profession, the special committee dealing with the subject has expressed the opinion that the whole question of the medical organisation of the workhouse should be submitted to a thorough investigation with a view to secure the highest attainable standard of work. In order to obtain advice as to further proceedings, the committee is seeking an interview with the Local Government Board.

PRESENTATION TO DR. P. W. LATHAM.—It is proposed that a presentation be made to Dr. P. W. Latham by the medical men of Cambridge and district on his retirement from active work. He has for many years held a leading position as physician to Addenbrooke's Hospital, as Downing professor of medicine, and as a consultant for a very wide area. It is hoped that a meeting of subscribers may be convened to show the regard in which his fellow practitioners hold him. The honorary secretaries are Dr. J. Aldren Wright, honorary secretary of the Cambridge Medical Society, and Dr. H. Buckley Roderick, honorary secretary of the Cambridgeshire and Huntingdonshire Branch of the British Medical Association.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, TINDALL, AND COX, London. (For the Department of Education, Sudan Government, Khartoum.)

Fourth Report of the Wellcome Tropical Research Laboratories at the Gordon Memorial College, Khartoum. Volume B: General Science. Andrew Balfour, M.D., B.Sc., F.R.C.P. Edin., D.P.H. Camb., Director. Price 18*s.* net.

CHURCHILL, J. AND A., London.

Manual of Pathology, including Bacteriology, the Technic of Post-mortems, and Methods of Pathologic Research. By W. M. Late Coplin, M.D., Professor of Pathology, Jefferson Medical College, Philadelphia. Fifth edition, rewritten and enlarged. Price 21*s.* net.

DAVIS (F. A.) COMPANY, Philadelphia. PHILLIPS, STANLEY, 23, Creighton-road, Queen's Park, London, N.W.

A Text-book of Practical Gynecology. For Practitioners and Students. By D. Tod Gilliam, M.D., Emeritus Professor of Gynecology in Starling-Ohio Medical College. Fourth revised edition. Price 21*s.* net.

Diseases of Infancy and Childhood; Their Dietetic, Hygienic, and Medical Treatment. A Text-book designed for Practitioners and Students in Medicine. By Louis Fischer, M.D., Attending Physician to the Willard Parker and Riverside Hospitals of New York City. Fourth edition. Price 27*s.* 6*d.* net.

LIPPINCOTT (J. B.) COMPANY, Philadelphia and London.

International Clinics. Edited by Henry W. Cattell, A.M., M.D., Philadelphia, U.S.A., with Collaboration. Volume IV. Twenty-first Series. 1911. Price not stated.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.

A Manual of Surgical Treatment. By Sir W. Watson Cheyne, Bart., C.B., D.Sc., LL.D., F.R.C.S., F.R.S., and F. F. Burghard, M.S. Lond., F.R.C.S. New edition, entirely revised and largely rewritten, with the assistance of T. P. Legg, M.S. Lond., F.R.C.S., and Arthur Edmunds, M.S. Lond., F.R.C.S. In Five Volumes. Vol. I.: The Treatment of General Surgical Diseases. Price 21*s.* net.

NISBET, JAMES, AND CO., LIMITED, 22, Berners-street, London, W.

Nisbet's Medical Directory, 1912. In Two Parts. Part I.: Directory of Medical Practitioners. Part II.: The Local Directory. Price 8*s.* 6*d.* net.

Tuberculin in the Diagnosis and Treatment of Tuberculosis. Weber-Parkes Prize Essay, 1909. with Additions. By W. Camac Wilkinson, B.A. Syd., M.D. Lond., F.R.C.P., Late Lecturer in

Pathology (1884–1901) and Medicine (1901–1910), University of Sydney. Price 21s. net.

STEINHEIL, G., Paris.

Anatomie Topographique et Chirurgie du Thymus. Par M. le Dr. Eugène Olivier, Ancien Interne des Hôpitaux de Paris, Aide d'Anatomie à la Faculté de Médecine. Price not stated.

TAYLOR AND FRANCIS, Red Lion-court, Fleet-street, London.

A Guide to the Series of Pathological Specimens illustrating Injuries and Diseases of the Organs of Generation in the Female (including such as are incidental to Gestation and Parturition) in the Museum of the Royal College of Surgeons of England. By Alban H. G. Doran, Fellow of the College. Issued by Order of the Council of the College. Price 6d.

THACKER, SPINK, AND CO., Calcutta and Simla. THACKER, W., AND CO., 2, Creed-lane, London, E.C.

The Indian Medical Service. Being a Synopsis of the Rules and Regulations regarding Pay, Promotion, Pension, Leave, Examination, &c., in the Indian Medical Service, both Military and Civil. By Major B. G. Seton, V.H.S., I.M.S., Secretary to the Director-General, Indian Medical Service; and Major J. Gould, M.B., I.M.S., Staff Officer, Medical Mobilisation Stores, 3rd Division. Price 7s. 6d.

TRUTH PUBLISHING CO., LIMITED, 10, Bolt-court, Fleet-street, London, E.C.

Truth Cautionary List for 1912. Price 1s. By post, 1s. 2d.

UNIVERSITY COLLEGE, London.

Institute of Physiology, University College, London. Collected Papers. Vol. XVI. Edited by Ernest H. Starling, M.D., F.R.S., F.R.C.P., Jodrell Professor of Physiology. Price not stated.

UNWIN, T. FISHER, Adelphi-terrace, London; Inselstrasse, 20, Leipsic.

James Hutchison Stirling, His Life and Work. By Amelia Hutchison Stirling, M.A., Joint Translator of Spinoza's "Ethic," Author of "Torchbearers of History," &c. With Preface by the Right Hon. Viscount Haldane of Cloan. Price 10s. 6d. net.

WILEY, JOHN, AND SONS, New York. CHAPMAN AND HALL, LIMITED, London.

Nephritis: An Experimental and Critical Study of its Nature, Cause, and the Principles of its Relief. By Dr. Martin H. Fischer, Eichberg Professor of Physiology in the University of Cincinnati. The 1911 Cartwright Prize Essay of the Association of the Alumni of the College of Physicians and Surgeons, Medical Department of Columbia University, New York. First edition. First thousand. Price $2.50 net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

KIRWAN, FREDERICK MICHAEL, M.R.C.S. Irel., L.R.C.P. Irel., has been appointed Third Assistant Medical Officer at the East Sussex Asylum.

O'CONNOR, J. P., M.B., B.S. N.U.I., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Kingstown District of the county of Dublin.

WARD, A., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Crondall District of the county of Hants.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BANBURY, HORTON INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

BARROW-IN-FURNESS, NORTH LONSDALE HOSPITAL.—House Surgeon. Salary £100 per annum, with board and lodging.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Resident Surgical Officer. Salary £100 per annum, with apartments, board, and attendance.

BIRMINGHAM GENERAL HOSPITAL.—Assistant Physician. Salary £50 per annum.

BIRMINGHAM UNIVERSITY.—Lecturer in Physiology. Salary £150 per annum.

BRISTOL GENERAL HOSPITAL.—Senior House Surgeon. Salary £120 per annum, with board, residence, &c.

BRISTOL UNIVERSITY.—Lecturer on Surgery to Dental Students.

BURY ST. EDMUNDS, WEST SUFFOLK GENERAL HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, lodging, and laundry.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Second House Surgeon. Salary £80 per annum, with board, residence, and laundry.

CANCER HOSPITAL (FREE), Fulham-road, S.W.—Assistant Pathologist. Salary £350 per annum.

CATERHAM ASYLUM.—Third Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and washing.

CHARING CROSS HOSPITAL MEDICAL SCHOOL.—Lectureship in Hygiene and Public Health.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Resident Medical Officer. Salary £150 per annum, with board, &c.

DERBY COUNTY ASYLUM, Mickleover.—Junior Assistant Medical Officer. Salary £120 per annum, with apartments, board, washing, and attendance.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—Assistant House Surgeon. Salary £55 per annum, with board and washing.

DUNDEE DISTRICT ASYLUM.—Junior Resident Medical Officer. Salary £110 per annum, with board and apartments.

EASTBOURNE, COUNTY BOROUGH OF.—Assistant School Medical Officer and Assistant Medical Officer of Health. Salary £250 per annum.

EXMINSTER, DEVON COUNTY ASYLUM.—Fourth Assistant Medical Officer. Salary £130 per annum.

HAMPSTEAD GENERAL AND NORTH-WEST LONDON HOSPITAL.—House Physician and House Surgeon, each for six months. Salaries at rate of £70 per annum, with board and residence.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—Clinical Pathologist and Bacteriologist. Salary £200 per annum.

LARBERT, STIRLING DISTRICT ASYLUM.—Junior Assistant Medical Officer. Salary £130 per annum, with board, &c.

LEICESTER PARISH POOR-LAW INFIRMARY.—First Resident Assistant Medical Officer. Salary £140 per annum, with rations, apartments, and washing.

LIVERPOOL, DAVID LEWIS NORTHERN HOSPITAL.—Two House Physicians and Three House Surgeons, all for six months. Salaries at rate of £80 per annum, with residence and maintenance.

LIVERPOOL, ROYAL SOUTHERN HOSPITAL.—Two House Physicians and Three House Surgeons, all for six months. Salary at rate of £60 per annum, with board and residence.

LIVERPOOL UNIVERSITY.—Obstetric Assistant. Salary £100 per annum, with residence.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board and residence.

MIDDLESEX HOSPITAL MEDICAL SCHOOL.—Lecturer on Mental Diseases.

NEWCASTLE-UPON-TYNE UNION INFIRMARY AND WORKHOUSE.—Medical Superintendent. Salary at rate of £450 per annum.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £160 per annum, with apartments, attendance, light, and fuel.

OXFORD COUNTY ASYLUM, Littlemore, near Oxford.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with quarters, board, and laundry.

OXFORD, RADCLIFFE INFIRMARY AND COUNTY HOSPITAL.—House Surgeon and Casualty House Surgeon, unmarried, each for six months. Salaries at rate of £80 per annum, with board, &c.

PORTSMOUTH, ROYAL PORTSMOUTH HOSPITAL.—House Physician for six months. Salary £75 per annum, with board, &c.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL, 234, Great Portland-street, W.—Honorary Assistant Surgeon. Also Surgical Registrar. Salary £105 per annum.

ROYAL NAVAL MEDICAL SERVICE.—Fifteen Appointments.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Senior Resident Medical Officer, unmarried. Salary at rate of £100 per annum, with board, residence, and laundry.

SALFORD ROYAL HOSPITAL.—Casualty House Surgeon. Salary at rate of £50 per annum, with board and residence.

SALISBURY, FISHERTON HOUSE.—Junior Assistant Medical Officer, unmarried. Salary £120 per annum, with board, apartments, &c.

SHEFFIELD UNIVERSITY.—Demonstrator in Experimental Physiology and Pharmacology. Salary £200 per annum.

STAFFORD, COTON HILL LUNATIC HOSPITAL.—Assistant Medical Officer. Salary £150 per annum, with residence, board, and laundry.

SOUTHAMPTON COUNTY BOROUGH.—Assistant Medical Officer of Health. Salary £250 per annum.

SOUTHAMPTON WORKHOUSE INFIRMARY, Shirley Warren.—Resident Assistant Medical Officer. Salary £100 per annum, with apartments, rations, washing, and attendance.

STOKE-ON-TRENT, NORTH STAFFORDSHIRE INFIRMARY, Hartshill.—House Surgeon. Salary £100 per annum, with apartments, board, and washing.

WALSALL AND DISTRICT HOSPITAL.—House Surgeon. Salary £100 per annum, with board, residence, and laundry. Also House Physician. Salary £90 per annum, with board, residence, and laundry.

WEST AFRICAN MEDICAL STAFF.—Number of Appointments. Salary £400 per annum.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Surgeon. Salary £80 per annum.

WINDSOR, KING EDWARD VII HOSPITAL FOR WINDSOR, ETON, AND DISTRICT.—Senior House Surgeon. Salary £80 per annum, with residence, board, laundry, and attendance.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Resident Medical Officer. Salary at rate of £100 per annum, with board, rooms, and laundry.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Bangor, in the county of Down; at Yarmouth, in the county of the Isle of Wight; at Tavistock, in the county of Devon; and at Oxted, in the county of Surrey.

Births, Marriages, and Deaths.

MARRIAGES.

BLACKMORE—MARTIN.—On Jan. 30th, at St. Marylebone Parish Church, Mr. H. Stuart Blackmore, R.A.M.C., to Norah, elder daughter of Dr. Sidney Martin.

DEATHS.

JACKSON.—On Feb. 4th, at 15, Huntingdon-street, Barnsbury, London, N., James Jackson, M.R.C.S., L.S.A., aged 70 years.

MACKINDER.—On Jan. 28th, at Hove, Draper Mackinder, M.D., F.R.C.S. Edin., aged 93 years.

PURKIS.—On Feb. 2nd, at Sekondi, West Africa, Dennis Woodley Purkis, L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., in his 37th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

PUBLIC HEALTH IN JAMAICA.

IN his report for 1910–11 on the Colony of Jamaica, the Governor, Sir Sydney Ollivier, K.C.M.G., states that the total population of the island, as shown by the census taken on April 2nd, 1911, was 831,383 (males, 397,439; females, 433,944). This is an increase of 30 per cent. over the figures of 20 years ago. The marriage-rate per 1000 continues to fall. The percentage of illegitimate births amounted to 62·4, as against 60·0 in 1909–10. The total births registered numbered 31,918, as against 32,402 in the previous year, the birth-rate being 38·6 per 1000 of estimated population, as against 39·7 in 1909–10. The deaths registered numbered 19,119, the rate per 1000 of estimated population being 23·1, as compared with 22·8 in 1909–10. Infantile mortality was accountable for 8871 deaths (46·3 per cent.) during the year. These figures represent deaths of children under five years of age, and of this number 7743 (or 40·4 per cent. of the total deaths) were those of children under two years of age. This is 24·36 per cent. of the number of births recorded for the year.

The total number of patients treated in the hospitals of the island during the year was 26,338, of whom 7542, or 28½ per cent., suffered from malarial fever. The total of deaths from malarial fever, malarial poisoning, and undistinguished fever was 3433, or 324 less than in 1909–10. There seems, therefore, some ground for the belief that the measures taken for the abatement of malaria are beginning to have effect, and that if they are steadily maintained, and filling and drainage works are undertaken from year to year, the mortality from this cause will rapidly decrease. An account of these measures was given in our columns on May 20th last year (p. 1370).

A vigorous campaign against yaws has been pursued as a result of the passing of Law 23 of 1910. The difficulties which are attendant on dealing with the matter are considerable, and different systems have been adopted in various West Indian islands. Much has been expected from a policy of compulsory segregation instituted in certain of the colonies, but it has not been attended with such success as might have been attained had the circumstances been more favourable. The initial expense of building asylums, and the recurring expenditure on maintenance of a large number of patients, usually created so great a financial strain that in some cases the attempt had either to be abandoned or the stringency of the segregation laws relaxed. Many of the people believed that the disease was inevitable, and that it was better for the children to contract it when young so as to become immune in later life, and it is said that they were directly exposed to contagion with that object in view. The confinement in asylums was, moreover, so distasteful to those who had contracted the disease that they frequently hid themselves and were screened from the authorities by their friends.

The system now in force in Jamaica is that of affording out-door treatment at the expense of the Government, and employing rural constables to discover and to report cases occurring in their districts, to persuade them to present themselves for treatment, and to return to the medical officer and continue doing so until cured. The reports received from the various district medical officers are, on the whole, very encouraging. In some districts there is a considerable decrease in the number of cases and a breaking down of the prejudice against medical treatment, as well as an increased willingness to present themselves voluntarily. The number of cases treated in 1910–11 was 7313, and in 1909–10 4555. The district medical officer at Port Antonio, Dr. C. A. Moseley, specially brings to notice the very satisfactory results obtained by him in the treatment of certain cases of yaws with the remedy known as "606." He used this remedy in four cases of several years' standing, and in each case the persons treated have to all outward appearances entirely recovered from the disease, and are now practically well. He recommends that the drug should be supplied to every hospital for the treatment of this disease, with a view to its being given a further trial.

The surgeon of the General Penitentiary called attention to the large percentage of prisoners admitted into the institution who were found to be suffering from hookworm disease, and stated that as a result of examinations it was shown that out of 71 persons admitted 51, or over 70 per cent., were found to harbour the worm. Reports from several district medical officers go to show that the disease is much more prevalent than has generally been supposed, not only among the East Indians, but also among the native population, and that many cases which might be attributed to malaria will in future be found to be due to hookworm. 50 per cent. of the prisoners admitted into the St. Catherine District Prison are reported to harbour the worm.

One of the points brought to notice by the commission which was appointed to report on the distress in certain portions of the parishes of Manchester and St. Elizabeth in 1909 was that the prevalence of syphilis was a cause of much suffering and inefficiency, and a vote was taken to enable the disease to be dealt with in these districts. As a result 346 cases have been treated at Government expense.

During the year it was decided to undertake an investigation into the causes of the mysterious malady locally known by the generic title of "vomiting sickness," which breaks out in certain districts in the cold season amongst the poorer classes, and, while maintaining a constancy of general characteristics, has hitherto displayed, when subjected to specific examination, a similitude to various forms of vegetable poisoning, to the effect of worms, meningitis, bronchitis, gastritis, and other more familiar diseases. Identified by one district medical officer as the result of poison, it has been speedily proved by another to be due to worms, and as quickly passed on by another as meningitis, and so on through the category. The Secretary of State, on being applied to, appointed, on the advice of the Tropical Diseases Research Committee, Captain T. J. Potter, R.A.M.C., to conduct the investigation. Captain Potter's report has not yet been received. With the view also of tracing the means by which enteric fever is disseminated, a committee has been appointed, consisting of Dr. A. G. Macdonald, the health officer of Kingston, where the greatest number of cases in any one locality in the island occur, and Mr. R. S. Turton, of Stony Hill, St. Andrew.

"CONSULTANTS."

To the Editor of THE LANCET.

SIR,—For the last 35 years I have worked as a general practitioner in a town about two hours' journey from London. Some of my patients when they are in town take the opportunity of going to see some "consulting" physician or surgeon about their health. The great man sees them, not in consultation with me, but by himself; and says to the patient: "Ah, I know Dr. X in your town. I will write to him and tell him what I think of your case, and will ask him to call on you and take charge of you." So the patient returns home and sends for Dr. X, and I never see the patient again, though I may have attended him or her and the family for many years. This sort of thing is frequently happening.

My object in writing to you is to ask why these great men in Harley-street, F.R.C.P. or F.R.C.S., are looked up to by general practitioners with honour and respect for behaving in a way which would stamp a general practitioner as a cad and a blackguard? Are good manners and professional courtesy to be reserved only for general practitioners?

I am, Sir, yours faithfully,

Jan. 31st, 1912. G.P.

*** The conduct described by "G.P." is universally condemned. Consultants would welcome the exposure of the offenders.—ED. L.

SOUTHWARK GUARDIANS AND THE DISSECTION QUESTION.

THE Southwark board of guardians, at their meeting on Thursday, Jan. 25th, were asked by Mr. F. G. Parsons, secretary to the Anatomical Committee, St. Thomas's Hospital, to reconsider their decision to refuse to allow unclaimed bodies to be sent to the London schools of anatomy. Mr. Parsons, in a letter addressed to the chairman, wrote as follows: "I am writing in the hope that you, as chairman, will be broad-minded enough to look on both sides of this question, and realise how absolutely impossible it is to turn out doctors fitted to operate upon and attend the sick (poor as well as rich) without being able to study the body and to practise the operations. I can assure you that the state of affairs is really very grave at St. Bartholomew's Hospital. They are starting their session with only one body. Here at St. Thomas's I have only three, and the other schools are in the same plight. The action of the Southwark guardians has been the most serious blow which medical education has received for several years, because it represents such a large and important union. I do wish you would come and see for yourself how carefully we treat the bodies committed to our charge, and let me bring you into touch with some of our leading medical men, from whom you may get any information you desire. Other guardians have done this and have gone away fully satisfied." Mr. C. W. Matkin, vice-chairman, inquired whether the St. Thomas's school of anatomy was dependent solely on the Southwark Union for bodies. The chairman, Mr. W. Savage, replied that he was unable to say. Mr. G. Hills, in proposing that the board adhere to the previous resolution not to allow any more bodies to be sent to the school of anatomy, said he was glad to learn that other boards of guardians, especially in the North of England, were following the example of the Southwark board of guardians. The resolution was carried without further discussion.

THE TYPEWRITING MACHINE IN MEDICINE.

IN a neat little pamphlet recently issued the Yost Typewriter Co., Limited, of 50, Holborn Viaduct, London, E.C., draw attention to the advantages of the typewriter to the medical man. The company has introduced machines specially adapted for the use of professional men in, for example, the writing of prescriptions and reports, records of diagnosis, and the preparation of articles for the press. The medical signs used in prescriptions are fitted to the Yost typewriter. A facsimile of a handwritten prescription, which is hard to beat for its illegibility, is illustrated, facing an elegant reproduction of it in the neat and clear typewriting of the Yost typewriter. Similar examples of elegant typewriting are given applied to making therapeutical records.

HEALTH MATTERS IN MAURITIUS.

ONE of the latest papers presented to Parliament before the prorogation in December was the report on the Mauritius 'Blue-book for the year 1910. From this it appears that the population of the colony (excluding the military and non-resident shipping population) is about 370,000, whilst the estimated population in the dependencies and outlying islands is 6289. The total number of births in the year was 13,338, giving a proportion of 35·7 infants born to 1000 persons living. The deaths registered numbered 12,488, giving a proportion of 33·4 deaths to 1000 persons living, the lowest since the year 1904. The birth-rate showed an increase of 1·4 per 1000 as compared with 1909, and the death-rate a decrease of 3·3 per 1000. The number of patients who were admitted to the public hospitals fell from 27,751 in 1908 to 23,205 in 1909, and 18,128 in 1910. The case mortality, however, showed a further rise, that for 1909 being 5·83 per cent., the highest recorded since 1906, and that for 1910 being 6·03 per cent., the highest since 1896. The number of deaths attributed to diseases classified as specific, febrile, or zymotic was 6369, or 51 per cent. of the total, of which 4593 were due to malarial diseases, 732 to diarrhœal diseases (dysentery 582 and diarrhœa 150), 385 to miasmic diseases, and 519 to bubonic plague. There were 1094 deaths from constitutional diseases, of which 105 were due to phthisis and 775 to tuberculosis, the figures for these two diseases in 1909 having been 152 and 809 respectively. There were 3382 deaths attributed to local diseases, of which 1522 were due to diseases of the respiratory system.

There was a severe outbreak of plague, the total number of cases being 731—a greater number than in any year since 1903, when 1395 cases were recorded. The first outbreak of plague occurred in 1899, when 1416 cases were registered. From 1903 onward each year, with the exception of 1906, showed a decrease in the number, and in 1908 there were only 167 cases. The following year showed a large increase, which was continued in 1910. In 1908 the cases were confined to Port Louis and the district of Plaines Wilhelms; in 1909 the outbreak spread to Pamplemousses, Rivière du Rempart, Moka, and Savanne; and in 1910 every district in the island was attacked. The disease assumed principally the bubonic form, 615 cases being of that type. There were 25 cases of pneumonic and 2 of septicæmic plague, all of which proved fatal. Of the total number of 731 cases, 553 proved fatal, giving a case mortality of 75·6 per cent. Gratuitous vaccination with Haffkine's antiplague vaccine was offered to the public and the fluid was issued free to those who applied for it; 1218 persons availed themselves of this means of protection, of whom one contracted the disease and died.

Malarial fever accounted for 2338 admissions to public hospitals, as compared with 3674 in 1906, 4272 in 1907, 5071 in 1908, and 3929 in 1909. The case mortality was 0·8 per cent., as compared with 0·91 per cent. in the previous year. The death-rate for malarial diseases fell to 12·3 per 1000 of the population, as compared with 14 per 1000 in 1909 and 15·5 per 1000 in 1908. Corresponding to the decrease in the number of malarial patients admitted to the hospitals, there was a decrease in the number of admissions for splenic hypertrophy, the figures being 1193 in 1908, 886 in 1909, and 561 in 1910.

In the Government and aided schools 12,724 children were examined for enlarged spleen, 24 per cent. of the children being found to be affected. The examination of children on the estates had not proved successful owing to the disinclination of the labourers to allow their children to be submitted to a spleen examination. The free distribution of quinine from depôts and at schools has been continued, the amount of the drug so distributed being 2151 lb. In April, 1910, malaria broke out in an epidemic form at La Dagotière and Valetta in the district of Moka, and a vigorous campaign was at once undertaken, in which ready assistance and coöperation was afforded by the proprietor of Valetta estate. The streams, canals, drains, and other places suited to the breeding of mosquitoes were cleared and cleaned, and quinine was distributed free by house-to-house visitation. As a result of these measures, the number of deaths at La Dagotière fell from 21 in the first half of the year to 6 in the second half, and at Valetta from 14 in the first half to 6 in the second half of the year. The number of children presented for vaccination at the public vaccine stations was 10,312, as compared with 9709 in 1909. Of this number 10,097 were successful.

THE "ALBAR" BREATHING APPARATUS.

WE have received from the Rev. Allan Barratt a little instrument, which he has invented for the purpose of expanding the alæ nasi and thus allowing the maximum quantity of air to reach the lungs through the nose. The instrument is made either of silver or of gold, and consists of a short length of stiff wire with a small forceps-like attachment hinged at each end. The forceps are fastened to the sides of the nose by means of a small screw, and the alæ are thus stretched apart. The apparatus is comfortable to wear, and is certainly in suitable cases an aid in overcoming mouth-breathing. An instrument of this kind might prove of use after operations for adenoids and polypus. The agents are the Albar Sales Company, 46, Holborn Viaduct, London, E.C., and the price of the instrument is 7*s*. 6*d*. in silver and £1 1*s*. in gold.

THE MINN-SLING.

Dr. G. V. Hewland has sent us for notice a new form of arm sling. The Minn-sling is really an adaptation of the triangular bandage made of a silk material, in black or colours. A broad piece of fabric is gathered at each end for the arm rest, and a band, with a buckle for adjustment, is attached to the gathered part and passed round the neck to suspend the sling. It is reversible, so that it can be used for either the right or the left arm, and is suitable for the whole limb, the forearm, or the hand. It seems to us that it should be light and comfortable to wear, while it grips the elbow quite firmly, and after the first adjustment the sling can be used again without alteration. The band can be worn under the coat collar, and there is no pressure on the neck from the buckle which comes at the side. We think the inventor can fairly claim that the Minn-sling possesses several advantages over the old handkerchief sling. It can be obtained in different sizes suitable from Messrs. Maw, Son, and Sons, of Aldersgate-street, London, E.C.

THE MODERN CATALOGUE OF THE MANUFACTURING CHEMIST.

THE advances made in pharmacy and pharmacology in recent years are well illustrated in the modern price list. It is, in fact, no longer a mere price list; it is very often a suggestive therapeutic guide. Apart from pure drugs and synthetic remedies there have now to be included the various metallo-organic preparations and those of organo-therapy. The call for control over the purity, constancy, and potency of modern remedies is urgent, and this is well illustrated in a general price list which has recently been issued by Messrs. Duncan, Flockhart, and Co., of South Canongate, Edinburgh, and 143, Farringdon-road, London, E.C. The list contains those standard drugs and combinations for which the firm is well known, and a section is devoted to the description of primary and secondary vaccines, tuberculins, and so forth.

"FOOD REFORM."

WE have received from the National Food Association, which numbers among its vice-presidents Sir Lauder Brunton, Professor Sims Woodhead, M.D., Professor Howard Marsh, F.R.C.S., and Professor Irving Fisher, of Yale, a copy of the new and revised edition of "Hints Towards Diet Reform," with 24 simple recipes. Copies can be obtained, price 2*d*., or post free 3*d*., from the secretary of the association, 178, St. Stephen's House, Victoria Embankment, London.

Enquirer would be glad if any reader of THE LANCET would inform him, through the medium of our columns, where he could find details regarding the technique of examination of the fæces for tubercle bacilli and deviation of complement in tuberculous individuals.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for the next few months:—

Feb. 13th–14th (London).—Central Poor-Law Conference.
March 7th–11th (Berlin).—Thirty-third Balneological Congress.
March 23rd–April 4th (London, Royal Agricultural Hall).—International Smoke Abatement Exhibition.
April 1st and 2nd (Milan).—Italian National Convention upon the Sexual Question.
" (London).—First Congress of Pure Food and Health Society of Great Britain.
" 1st–7th (Tunis).—Twenty-second Congress of French-speaking Alienists and Neurologists.
" 8th–13th (Rome).—Seventh International Congress of Dermatology and Syphilology.
" 8th–15th (Johannesburg).—Thirteenth South African Medical Congress.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Feb. 7th, 1912.

Date.		Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
Feb.	1	29·73	W.	...	45	40	34	34	35	Overcast
"	2	29·34	N.	...	43	32	26	...	27	Fine
"	3	29·53	W.	...	49	33	21	...	23	Fine
"	4	29·56	N.E.	...	39	28	23	...	24	Snowing
"	5	29·29	S.E.	0·03	44	37	23	...	25	Overcast
"	6	29·17	E.	0·05	56	47	25	37	37	Foggy
"	7	29·36	S.	0·02	74	50	37	41	42	Fine

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

TUESDAY.

SURGICAL SECTION (Hon. Secretaries—L. A. Dunn, James Berry): at 5.30 P.M.

Joint Meeting with the MEDICAL SECTION and SECTION OF ANÆSTHETICS.

Debate:

On a Paper by Mr. T. P. Dunhill of Melbourne: Partial Thyroidectomy under Local Anæsthesia, with Special Reference to Exophthalmic Goitre.

The Debate will be opened by Sir Victor Horsley, F.R.S. The following will take part in the Debate:—Mr. Charters Symonds, Mr. Leedham Green (Birmingham), Mr. Walter Edmunds, Mr. Wilfred Trotter, Mr. Lynn Thomas (Cardiff), Mr. Rupert Farrant, Dr. Hector Mackenzie, Dr. George Murray, Dr. Hale White, Dr. Herbert Scharlieb, Dr. Blumfeld, Dr. G. A. H. Barton, Dr. Albert Kocher (Berne), and Mr. James Berry.

The Debate will be continued on February 27th.

THURSDAY.

DERMATOLOGICAL SECTION (Hon. Secretaries—J. H. Sequeira, Wilfrid Fox), at 11, Chandos-street, W.: at 5 P.M.

Demonstration of Cases.

NEUROLOGICAL SECTION (Hon. Secretaries—Wilfred Harris, T. Grainger Stewart): at 8.30 P.M.

Dr. W. Harris: Two Cases of Hæmato-rhachis, one Cured by Laminectomy after 18 months.

Dr. F. L. Golla: The Vestibule and the Perception of Space.

FRIDAY.

OTOLOGICAL SECTION (Hon. Secretaries—Sydney Scott, A. Logan Turner), at 11, Chandos-street, W.: at 5 P.M.

Dr. W. A. Milligan: (1) A Case of Severe Vertigo (Menière's Disease ?), Operation, Recovery; (2) A Case of Suppurative Labyrinthitis Complicated with Suppurative Basal Meningitis, Operation, Trans-labyrinthine Drainage, Death, Post-mortem Records.

Mr. Hugh E. Jones: Three Cases of Operation on the Labyrinth for Vertigo (Non-suppurative).

Mr. Macleod Yearsley: Yankauer's New Speculum for the Direct Examination of the Naso-pharynx and Eustachian Tube.

Mr. George N. Biggs: Short Notes of a Very Severe Case of Streptococcal Infection of Both Ears.

Dr. P. Watson-Williams: Three Cases of Lateral Sinus Thrombosis.

ELECTRO-THERAPEUTICAL SECTION (Hon. Secretaries—G. Harrison Orton, Cecil R. C. Lyster): at 8.30 P.M.

Papers:

Dr. F. Hernaman-Johnson: Secondary X-radiations, their Uses and Possibilities in Medicine.

Mr. William Hampson: A Method of Reducing Excessive Frequency of the Heart Beat by Means of Rhythmical Muscle Contractions Electrically Stimulated.

MEDICAL SOCIETY OF LONDON, 11, Chandos-street, Cavendish-square, W.

MONDAY.—8.30 P.M., Dr. StClair Thomson: Cancer of the Larynx Treated by Larynx-fissure, with 80 per cent. of Lasting Cures.—Dr. W. H. Kelson: Aching Throat.

PHARMACEUTICAL SOCIETY OF GREAT BRITAIN, 17, Bloomsbury-square, W.C.

TUESDAY.—8 P.M., Prof. H. G. Greenish and Miss D. J. Bartlett: The Powdered Gentian, Nux Vomica, and Ipecacuanha of Commerce.

HUNTERIAN SOCIETY, London Institution, Finsbury-circus, E.C.

WEDNESDAY.—8.30 P.M., Council Meeting. 9 P.M., Dr. G. Lyon: The Cure of Consumption, a Review and a Forecast.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Grosvenor-road, S.W.

WEDNESDAY.—5 P.M., Lieut.-Col. C. H. Melville, R.A.M.C.: Boots.—Mr A. H. Tubby: Foot Deformities Acquired in Adult Life.—Lieut. Col. J. F. Donegan, R.A.M.C.: Demonstration of a Field Operating Table and of a Method of Attaching the First Field Dressing.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. A. M. H. Gray: Clinique (Skin). 5.15 P.M. Lecture:—Mr. C. H. Fagge: On the Selection for Operation of Fractures of the Long Bones.

TUESDAY.—4 P.M., Dr. H. Campbell: Clinique (Medical). 5.15 P.M., Lecture:—Dr. D. Forsyth: Coma and its Differential Diagnosis.

WEDNESDAY.—4 P.M., Mr. R. Milne (jun.): Clinique (Surgical). 5.15 P.M., Lecture:—Dr. F. J. McCann: Some Common Mistakes in the Diagnosis of the Diseases of Women.

THURSDAY.—4 P.M., Dr. R. Pritchard: Clinique (Medical). 5.15 P.M., Lecture:—Dr. J. L. Bunch: Some Tubercular Affections of the Skin.

FRIDAY.—4 P.M., Dr. J. G. French: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Edwards: Rectal Surgery.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Morton: The Principles and Applications of Radio-Therapeutics.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Mr. Etherington-Smith: Clinical. (Lecture I.)

THURSDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery. (Lecture IV.)

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Pritchard: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Abraham: Cases of Skin Disease.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. R. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan).

TUESDAY.—Clinic: 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld).; Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Lecture:—Dr. W. H. Duncan: The Diagnosis of Malignant Disease.

WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Mr. W. Steuart); Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan). 5.30 P.M., Eye Operations (Mr. Brooks).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Lecture:—Dr. G. N. Meachen: Eczema and Allied Conditions.

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. R. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie); Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan).

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 5 P.M., Special Lecture:—Mr. McGavin: Fractures.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye. 3.30 P.M., Special Lecture:—Mr. Cargill: Squint (Concomitant and Paralytic).

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 2.15 P.M., Special Lecture:—Dr. Rankin. Enteric Fever.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—10 A.M., Radiography. 11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.

THURSDAY.—4 P.M., Lecture:—Mr. Corner: Delayed Chloroform Poisoning.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. H. Tooth: Hysterical Paralysis.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. H. Tooth: Disseminated Sclerosis.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—6 P.M., Dr. W. K. Sibley: General Principles of Treatment of Diseases of the Skin.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Seborrhœa and Psoriasis dealt with as Stages of the Same Dermatitis in Symptoms, Diagnosis, and Treatment.

UNIVERSITY OF LONDON (UNIVERSITY COLLEGE), The Francis Galton Laboratory for National Eugenics.

TUESDAY.—8.30 P.M., Ethel M. Elderton: Infantile Mortality—the Employment of Mothers and the Occupation of Fathers. (Lecture III.)

GRESHAM LECTURES, City of London School, Victoria Embankment, E.C.

TUESDAY.—6 P.M., Dr. F. M. Sandwith: Sleeping Sickness—The Tsetse Fly Disease of Animals and the Early History of Sleeping Sickness.

WEDNESDAY.—6 P.M., Dr. F. M. Sandwith: Sleeping Sickness—How Sleeping Sickness is Conveyed to Man.

THURSDAY.—6 P.M., Dr. F. M. Sandwith: Sleeping Sickness—What We Know To-day about Sleeping Sickness.

FRIDAY.—6 P.M., Dr. F. M. Sandwith: Sleeping Sickness—Lantern Slides illustrating the Previous Lectures.

ROYAL INSTITUTION OF GREAT BRITAIN, Albemarle-street Piccadilly, W.

TUESDAY.—3 P.M., Prof. W. Bateson: The Study of Genetics. (Lecture V.)

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Mr. E. S. Bishop: Gastric Surgery. (Post-Graduate Clinic.)

MANCHESTER ROYAL INFIRMARY.

TUESDAY.—4.30 P.M., Dr. Cunliffe: Exophthalmic Goitre and Myxœdema.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (12th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (13th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.) Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (14th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's 2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (15th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (16th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M., Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (17th).—Royal Free (9A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

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Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

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We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

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MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

The Index and Title-page to Vol. II. of 1911 were given in THE LANCET of Dec. 30th, 1911.

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VOLUMES for the second half of the year 1911 are now ready. Bound in cloth, gilt lettered, price 16*s.*, carriage extra.

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